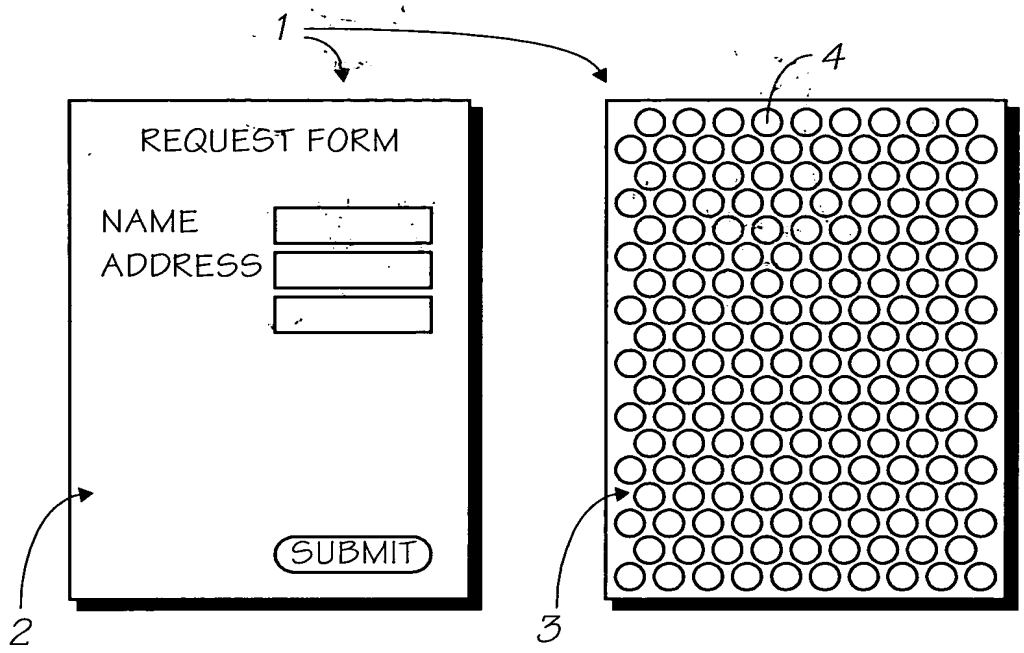
APPROVED BY DRAFTSMAN
O.G. FIG.
CLASS SUBCLASS



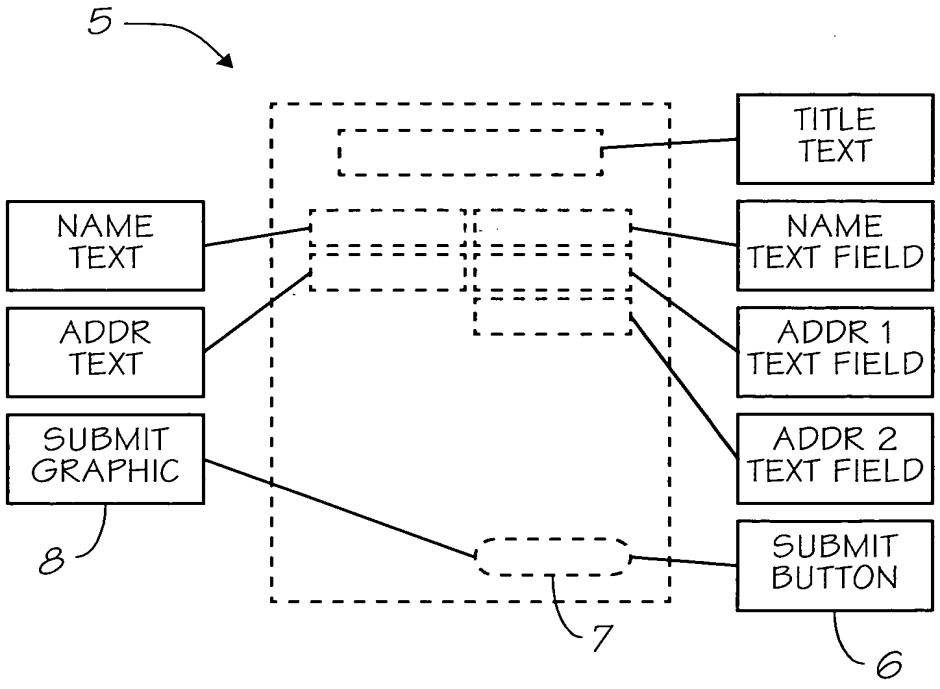


FIG. 1

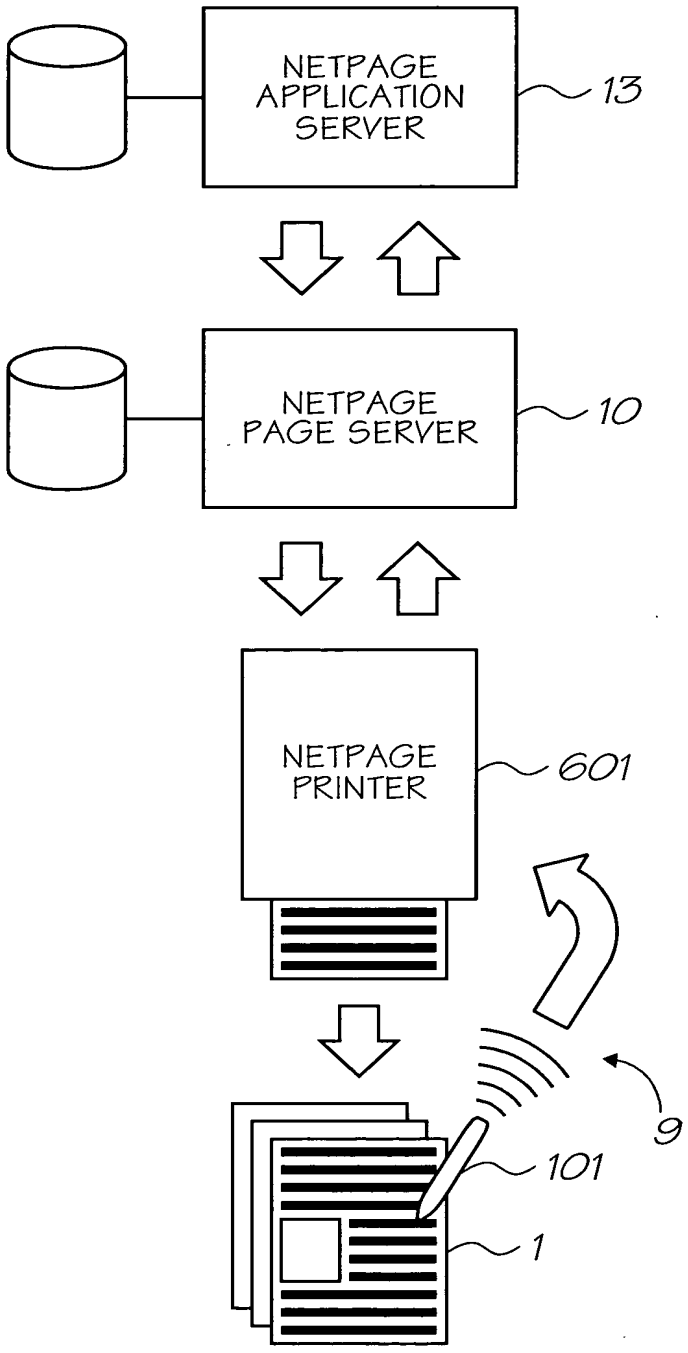


FIG. 2

PCT/US98/05198

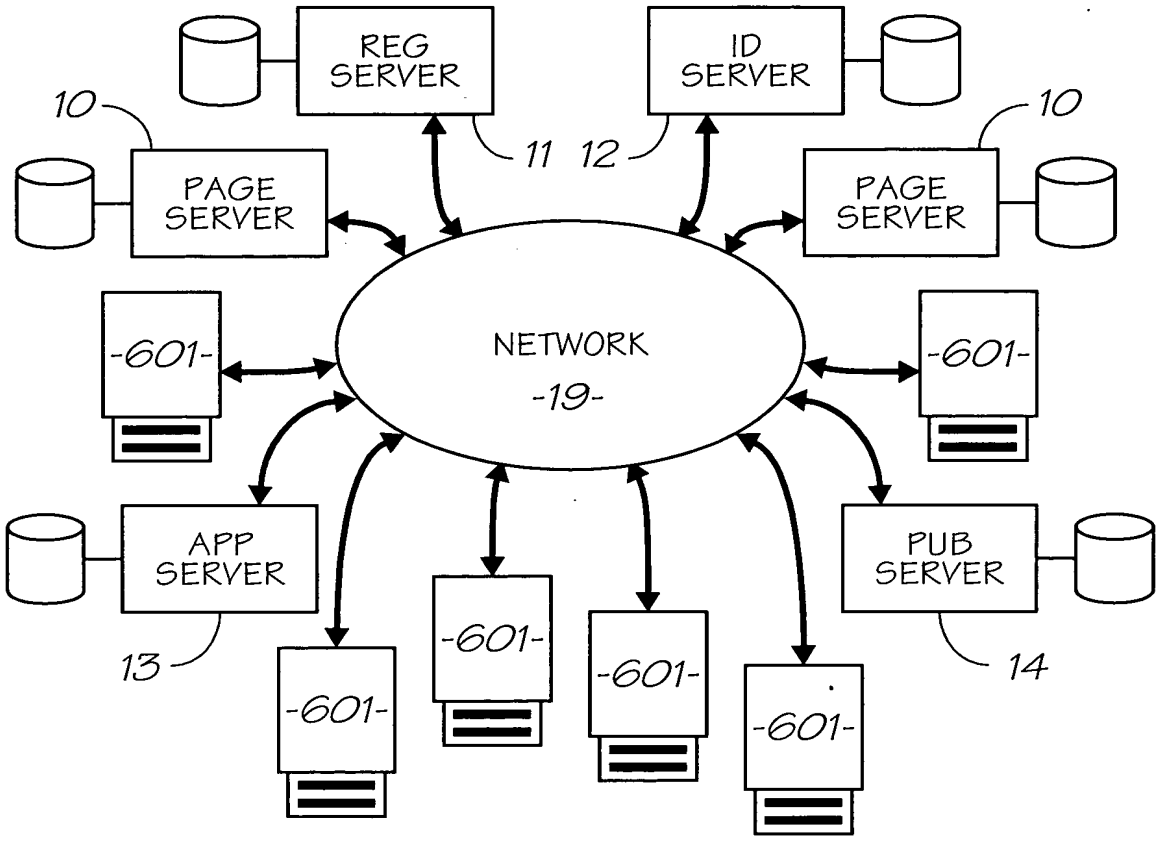

REG SERVER
ID SERVER
10
10
11
12
PAGE SERVER
PAGE SERVER
NETWORK
-19-
-601-
-601-
-601-
-601-
-601-
-601-
APP SERVER
PUB SERVER
13
14

FIG. 3

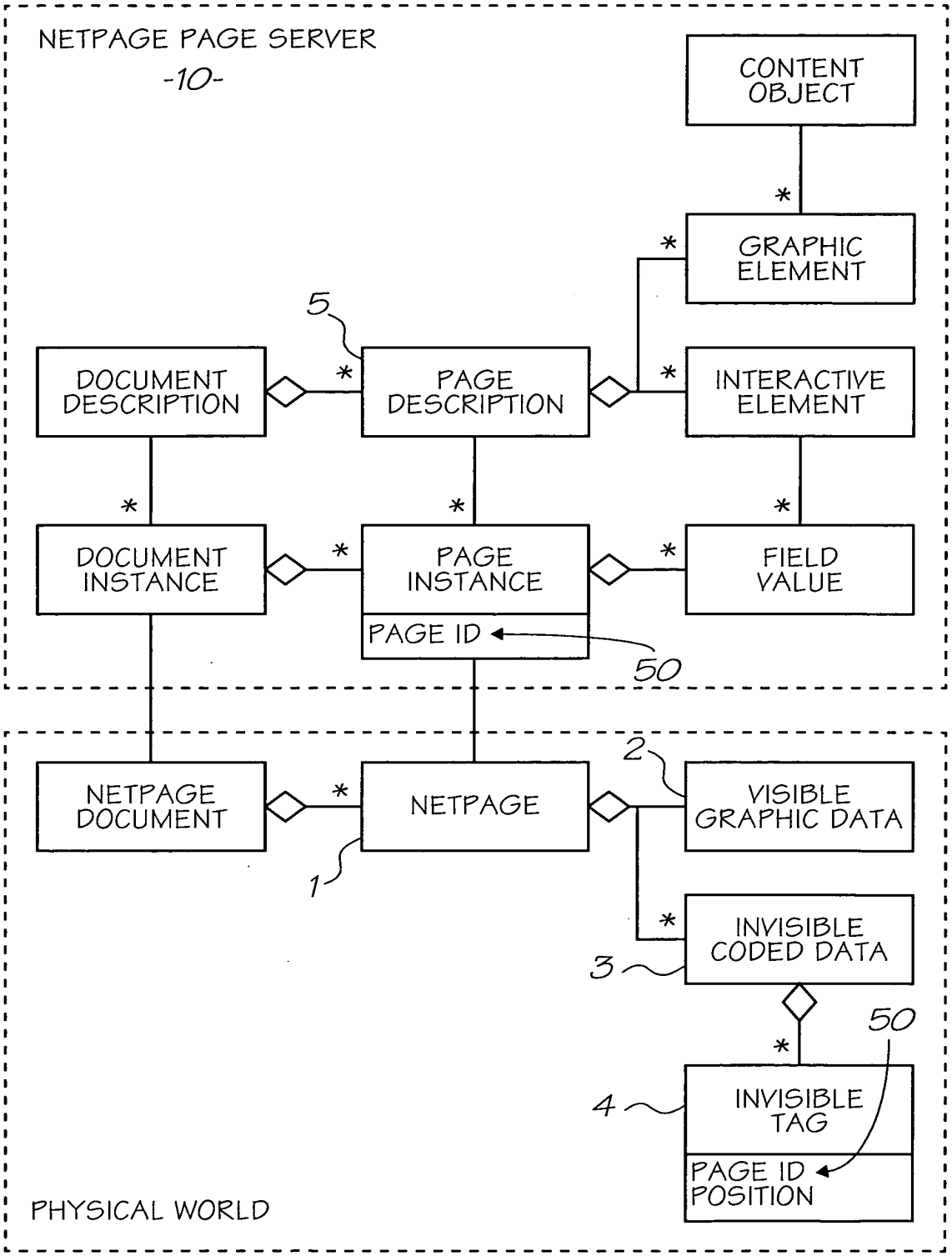

NETPAGE PAGE SERVER
-10-
CONTENT OBJECT
GRAPHIC ELEMENT
5
DOCUMENT DESCRIPTION
PAGE DESCRIPTION
INTERACTIVE ELEMENT
DOCUMENT INSTANCE
PAGE INSTANCE
FIELD VALUE
PAGE ID
50
NETPAGE DOCUMENT
NETPAGE
2
VISIBLE GRAPHIC DATA
1
INVISIBLE CODED DATA
3
50
INVISIBLE TAG
4
PAGE ID POSITION
PHYSICAL WORLD

FIG. 4

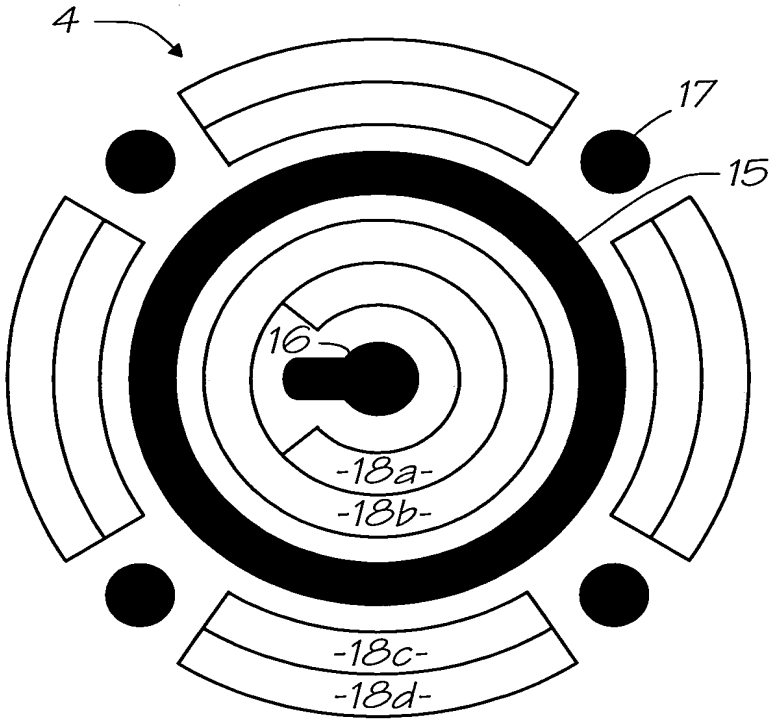


FIG. 5

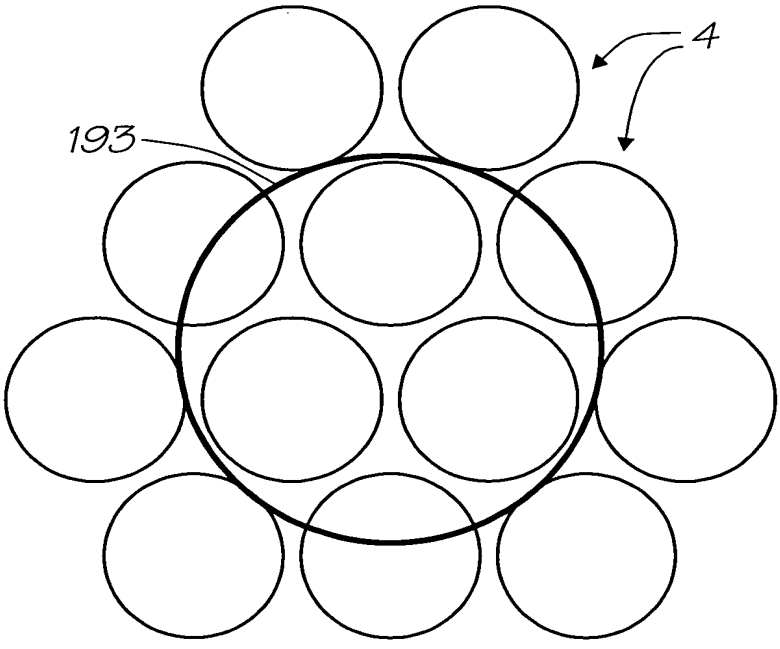


FIG. 6

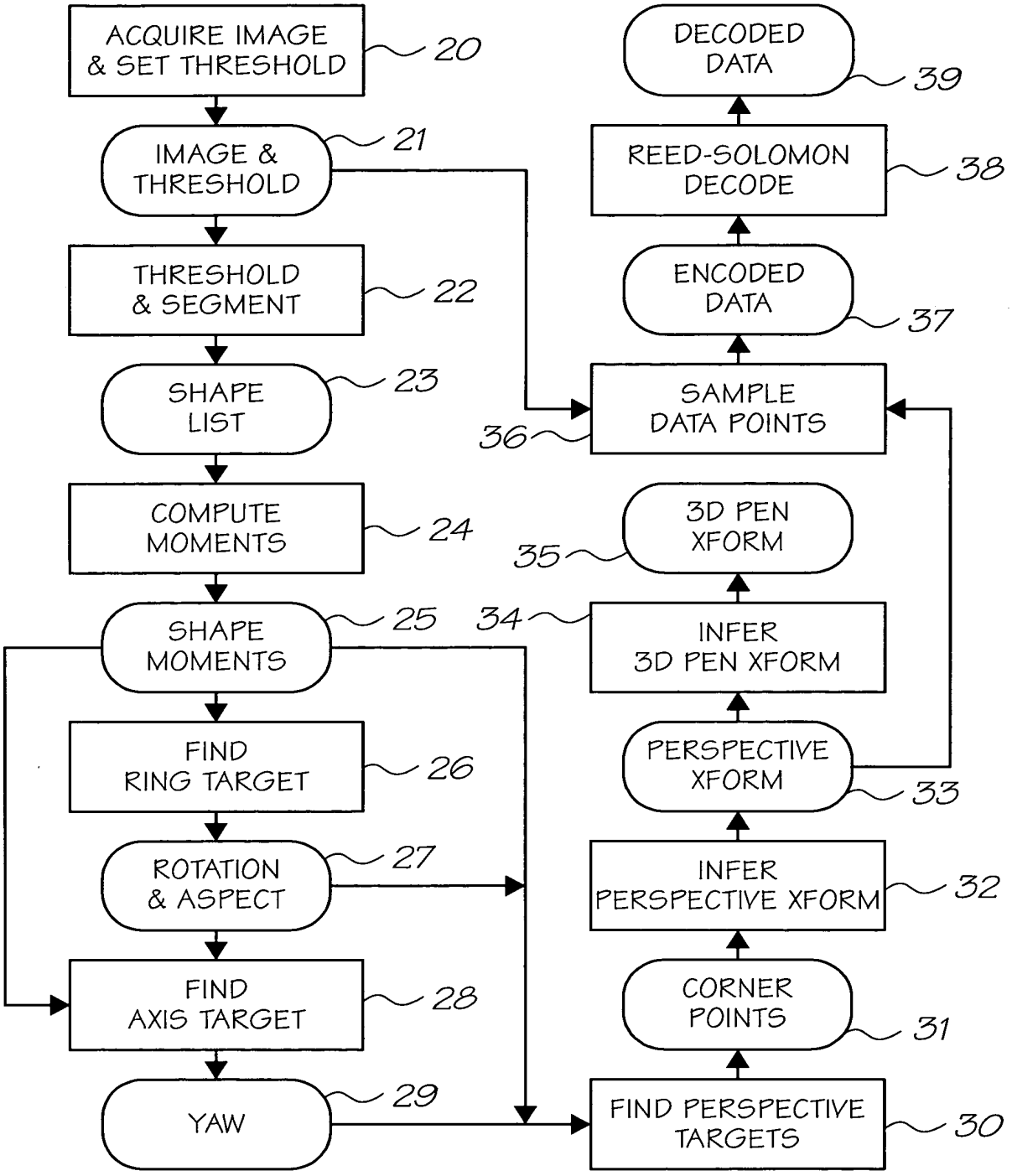

ACQUIRE IMAGE & SET THRESHOLD
20
IMAGE & THRESHOLD
21
THRESHOLD & SEGMENT
22
SHAPE LIST
23
COMPUTE MOMENTS
24
SHAPE MOMENTS
25
FIND RING TARGET
26
ROTATION & ASPECT
27
FIND AXIS TARGET
28
YAW
29
FIND PERSPECTIVE TARGETS
30
CORNER POINTS
31
INFER PERSPECTIVE XFORM
32
PERSPECTIVE XFORM
33
INFER 3D PEN XFORM
34
3D PEN XFORM
35
SAMPLE DATA POINTS
36
ENCODED DATA
37
REED-SOLOMON DECODE
38
DECODED DATA
39

FIG. 7

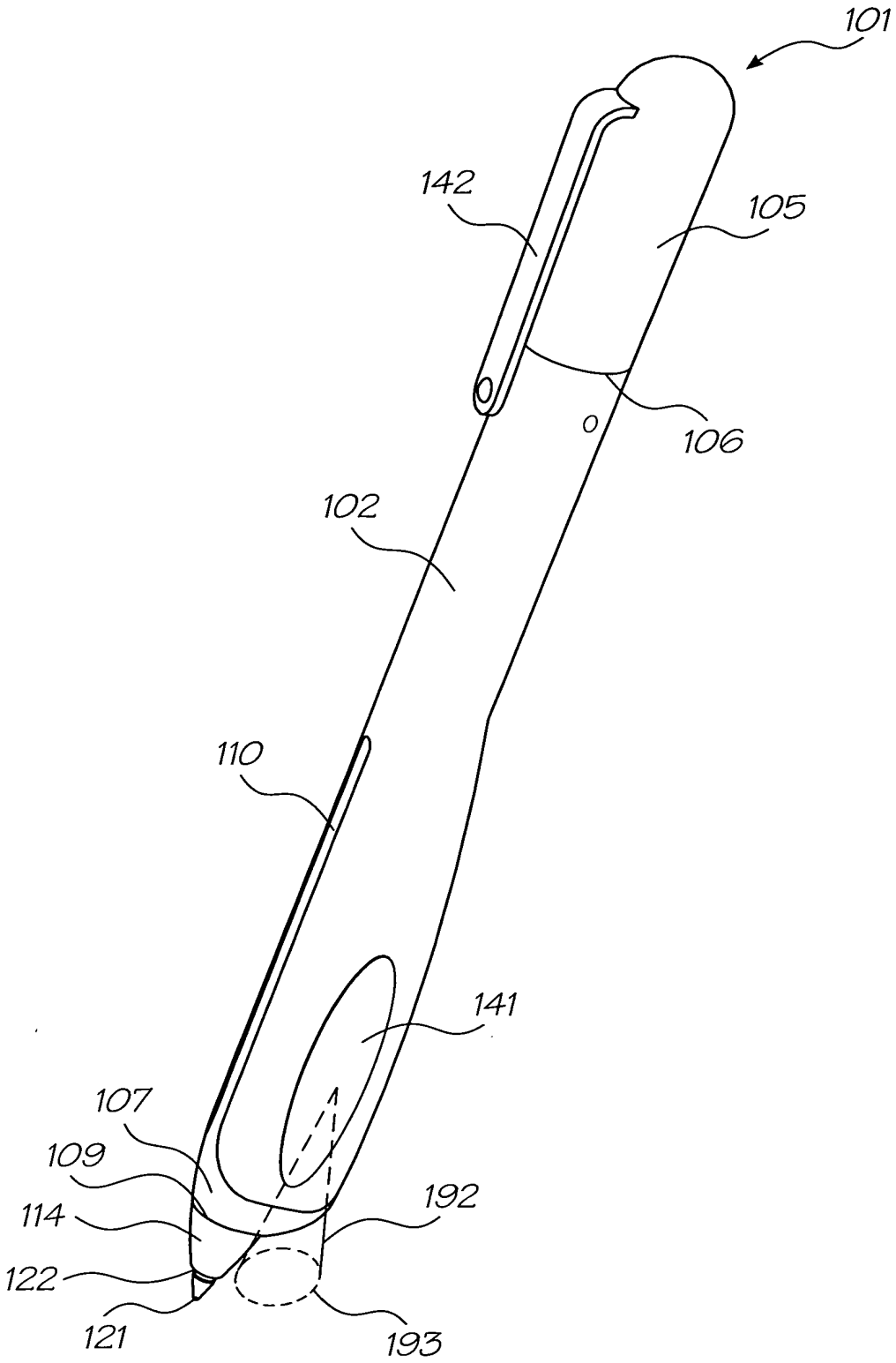


FIG. 8

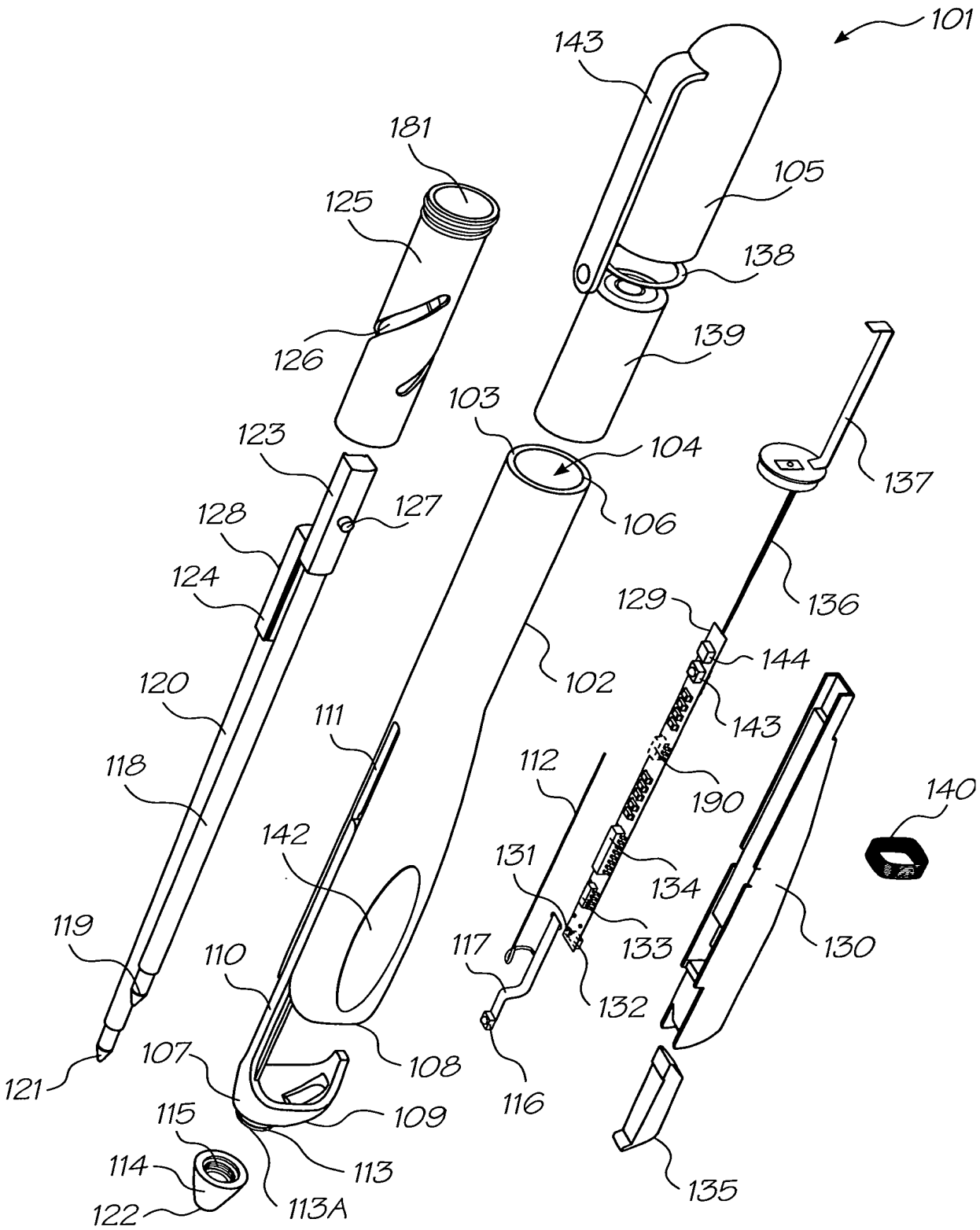

101
143
181
105
125
138
126
139
103
104
123
137
127
106
128
124
129
136
102
144
120
111
143
112
118
190
140
142
131
134
119
117
133
130
110
132
107
108
116
109
115
135
114
113
122
113A

FIG. 9

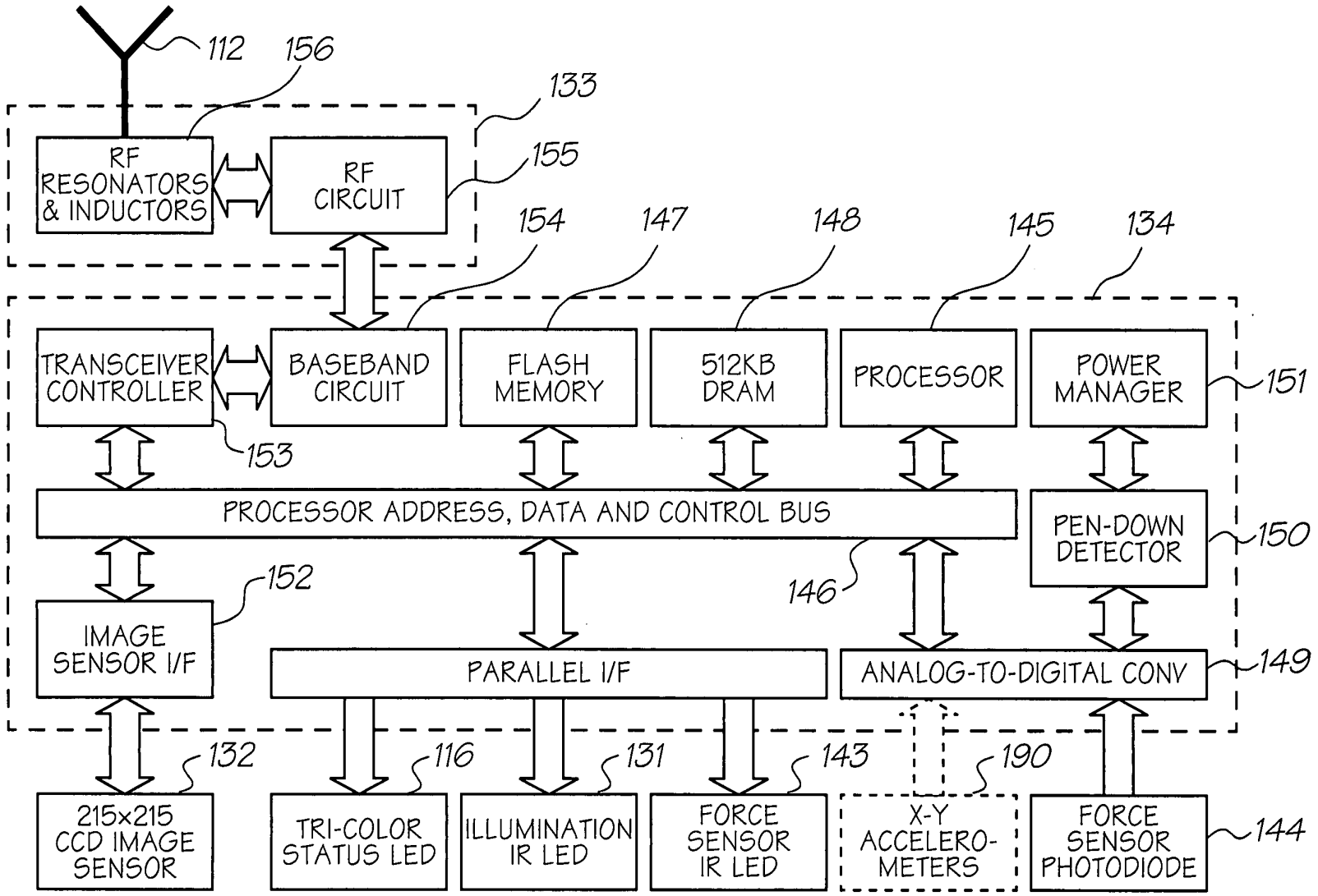

112
156
133
RF RESONATORS & INDUCTORS
RF CIRCUIT
155
154
147
148
145
134
TRANSCEIVER CONTROLLER
BASEBAND CIRCUIT
FLASH MEMORY
512KB DRAM
PROCESSOR
POWER MANAGER
151
153
PROCESSOR ADDRESS, DATA AND CONTROL BUS
PEN-DOWN DETECTOR
150
152
146
IMAGE SENSOR I/F
PARALLEL I/F
ANALOG-TO-DIGITAL CONV
149
132
116
131
143
190
215x215 CCD IMAGE SENSOR
TRI-COLOR STATUS LED
ILLUMINATION IR LED
FORCE SENSOR IR LED
X-Y ACCELERO-METERS
FORCE SENSOR PHOTODIODE
144

FIG. 10

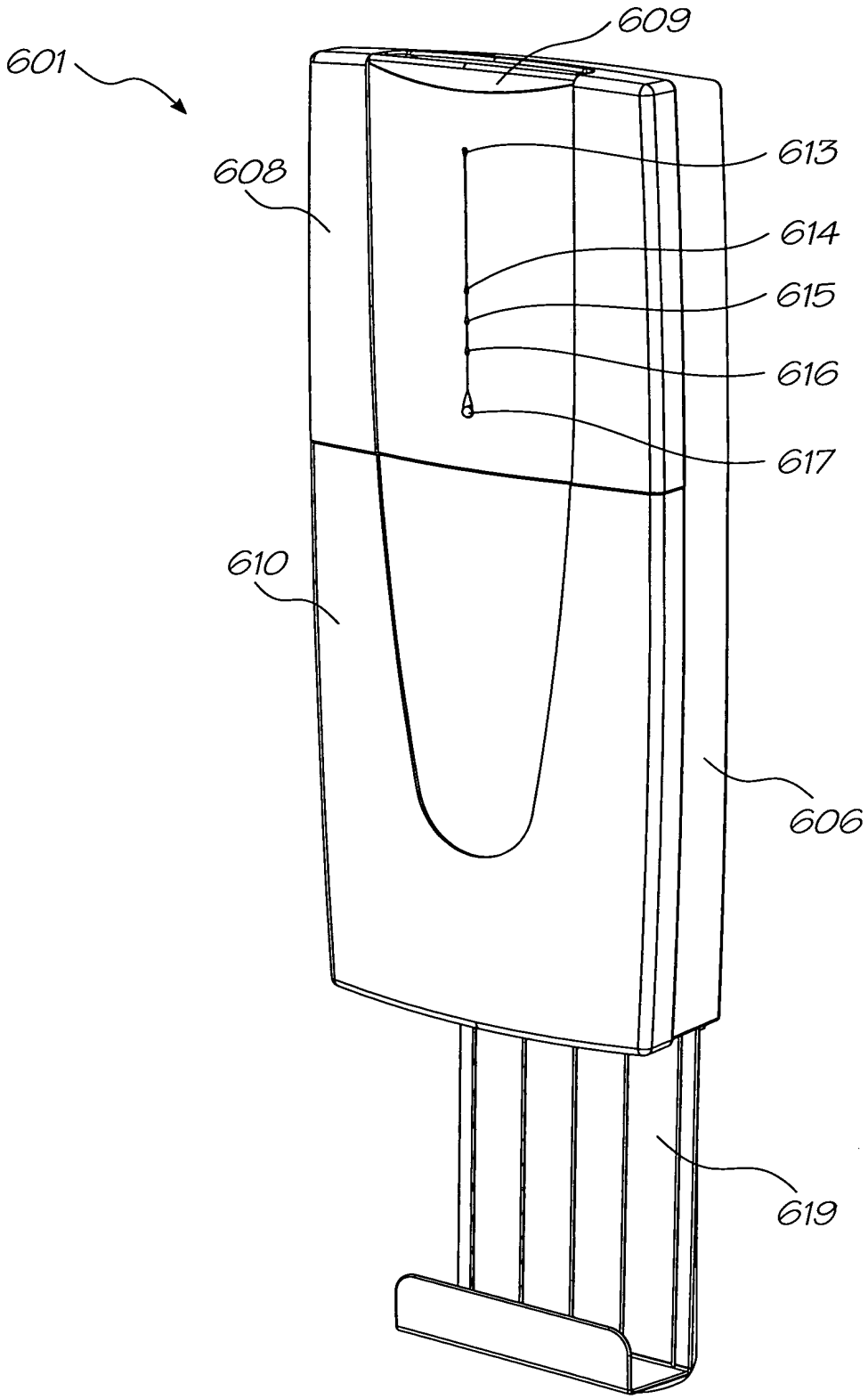


FIG. 11

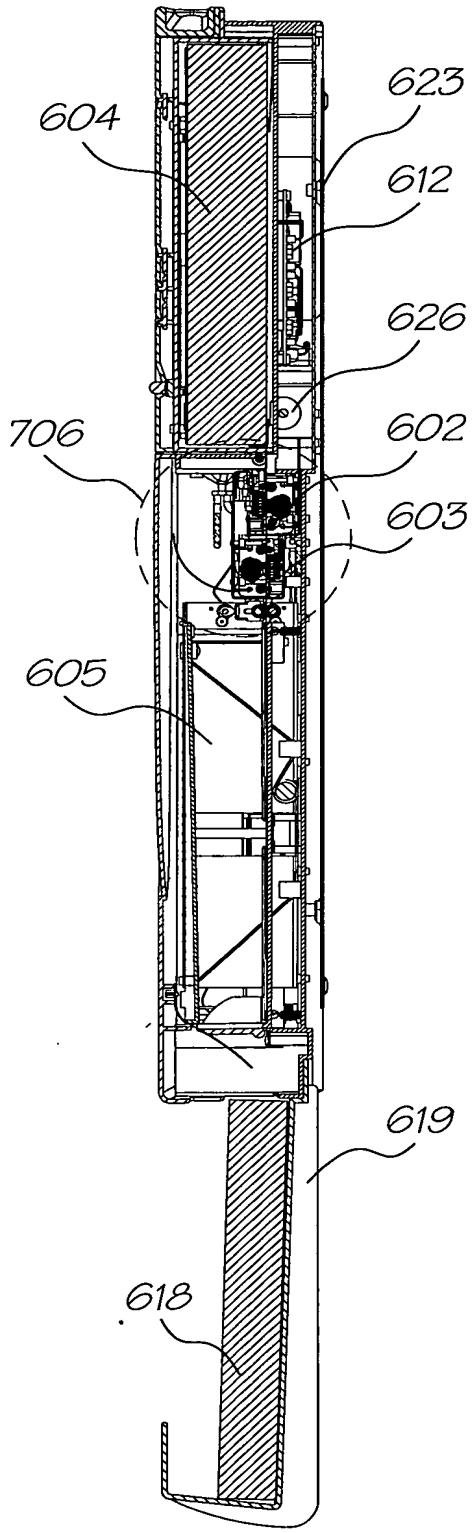


FIG. 12

09/575,150

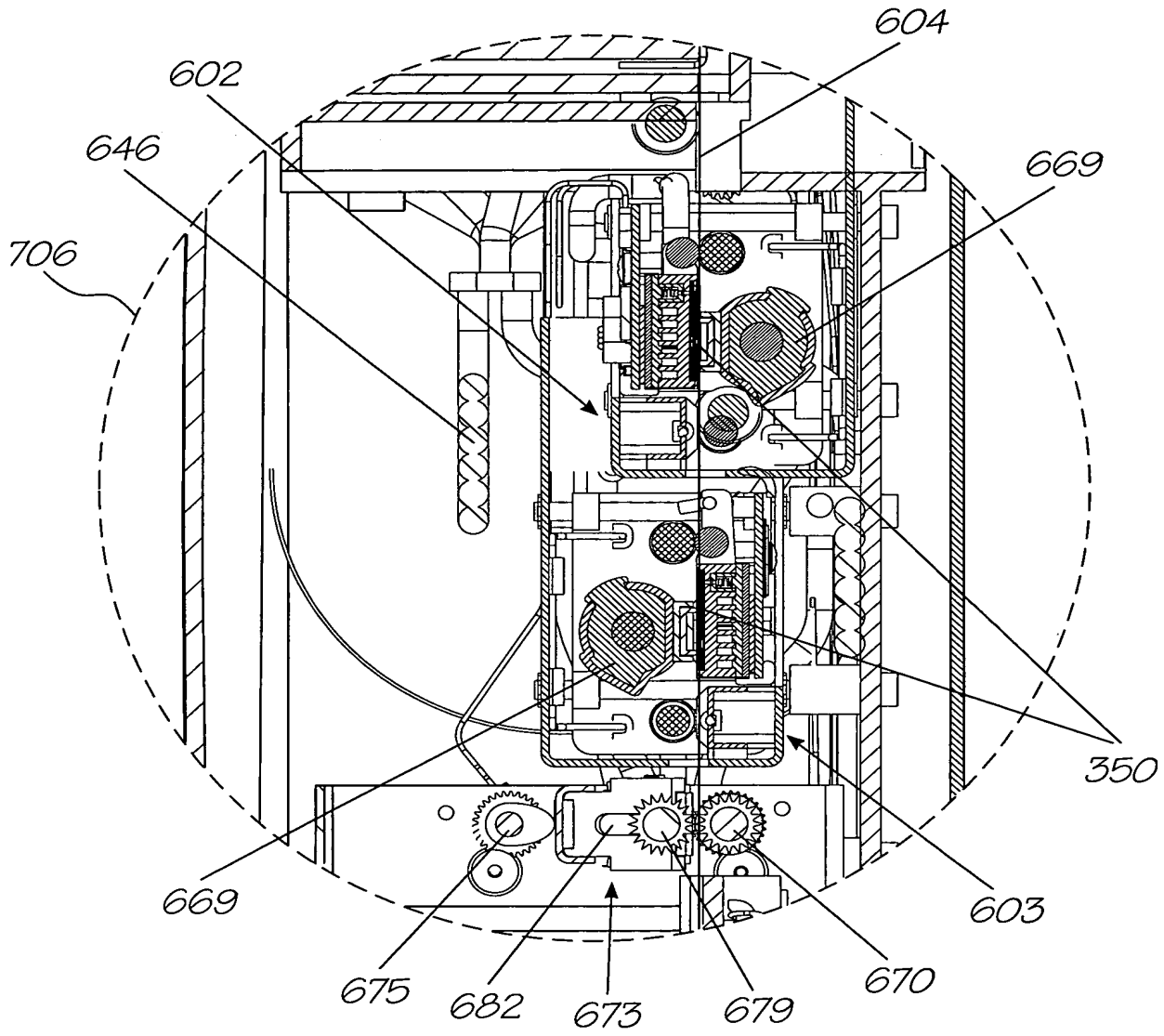


FIG. 12a

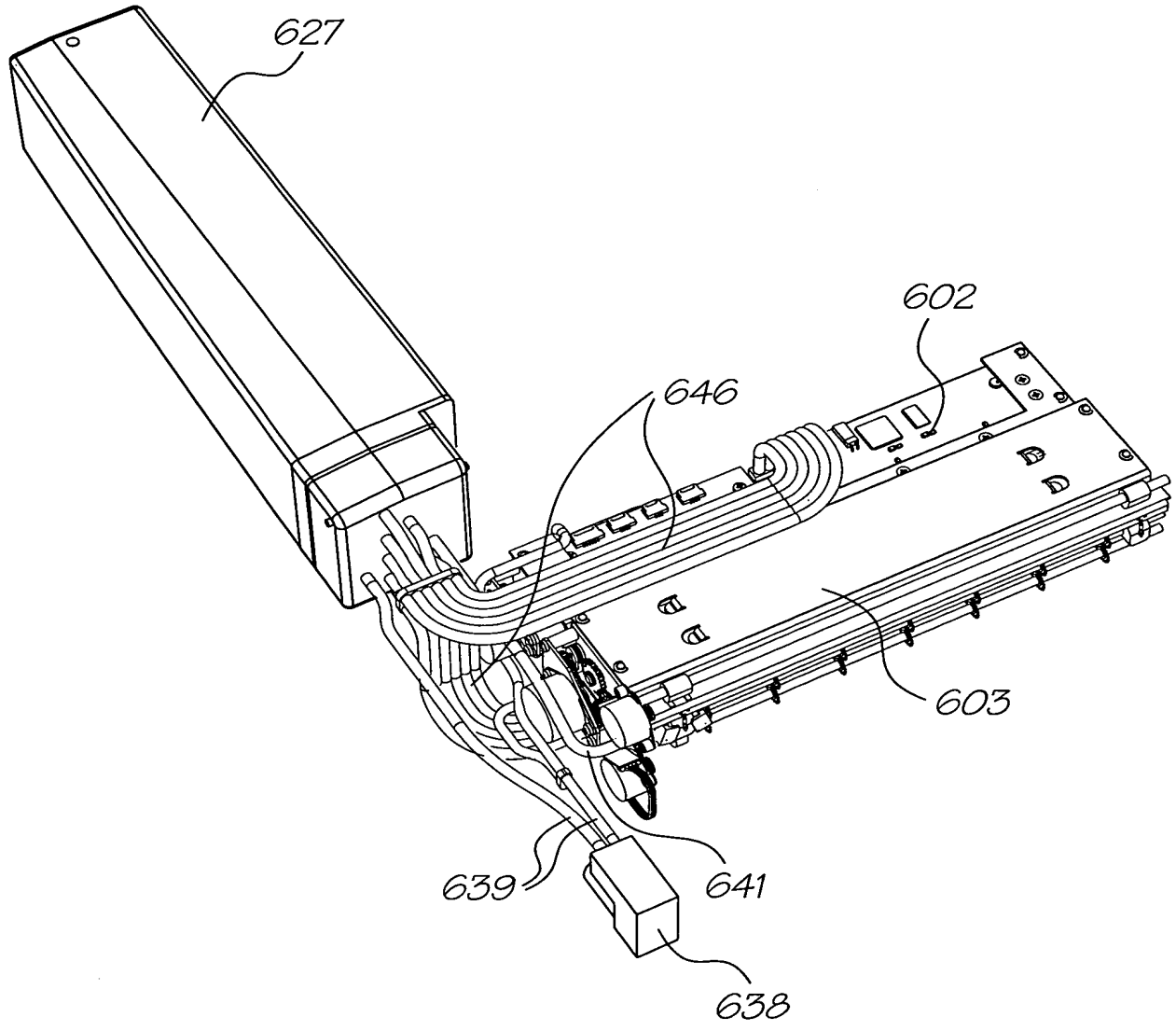


FIG. 13

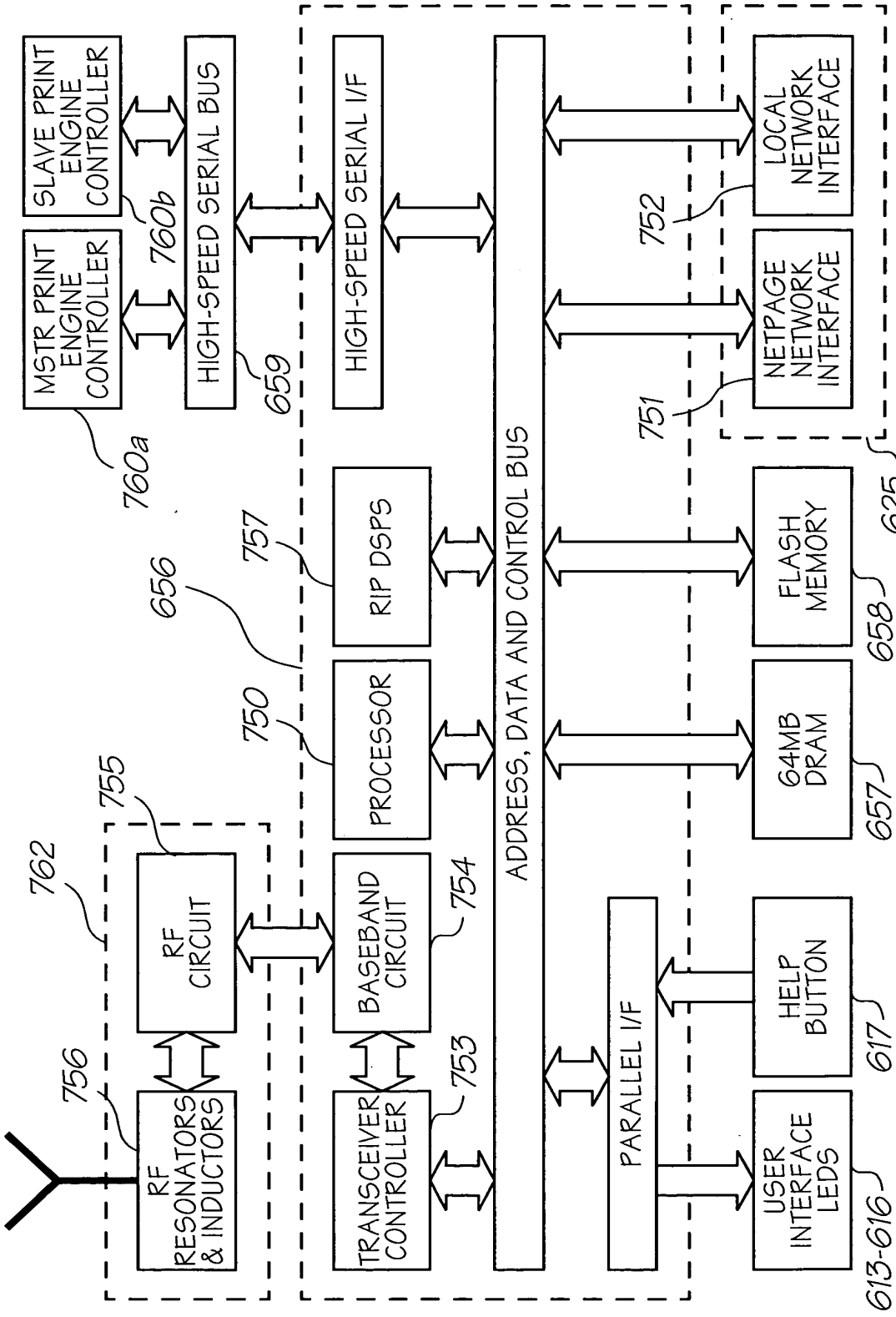

SLAVE PRINT ENGINE CONTROLLER
MSTR PRINT ENGINE CONTROLLER
HIGH-SPEED SERIAL BUS
HIGH-SPEED SERIAL I/F
LOCAL NETWORK INTERFACE
NETPAGE NETWORK INTERFACE
RIP DSPS
PROCESSOR
FLASH MEMORY
64MB DRAM
ADDRESS, DATA AND CONTROL BUS
RF CIRCUIT
BASEBAND CIRCUIT
RF RESONATORS & INDUCTORS
TRANSCEIVER CONTROLLER
PARALLEL I/F
HELP BUTTON
USER INTERFACE LEDS
760a
760b
659
757
656
750
751
752
625
658
657
755
762
754
756
753
617
613-616

FIG. 14

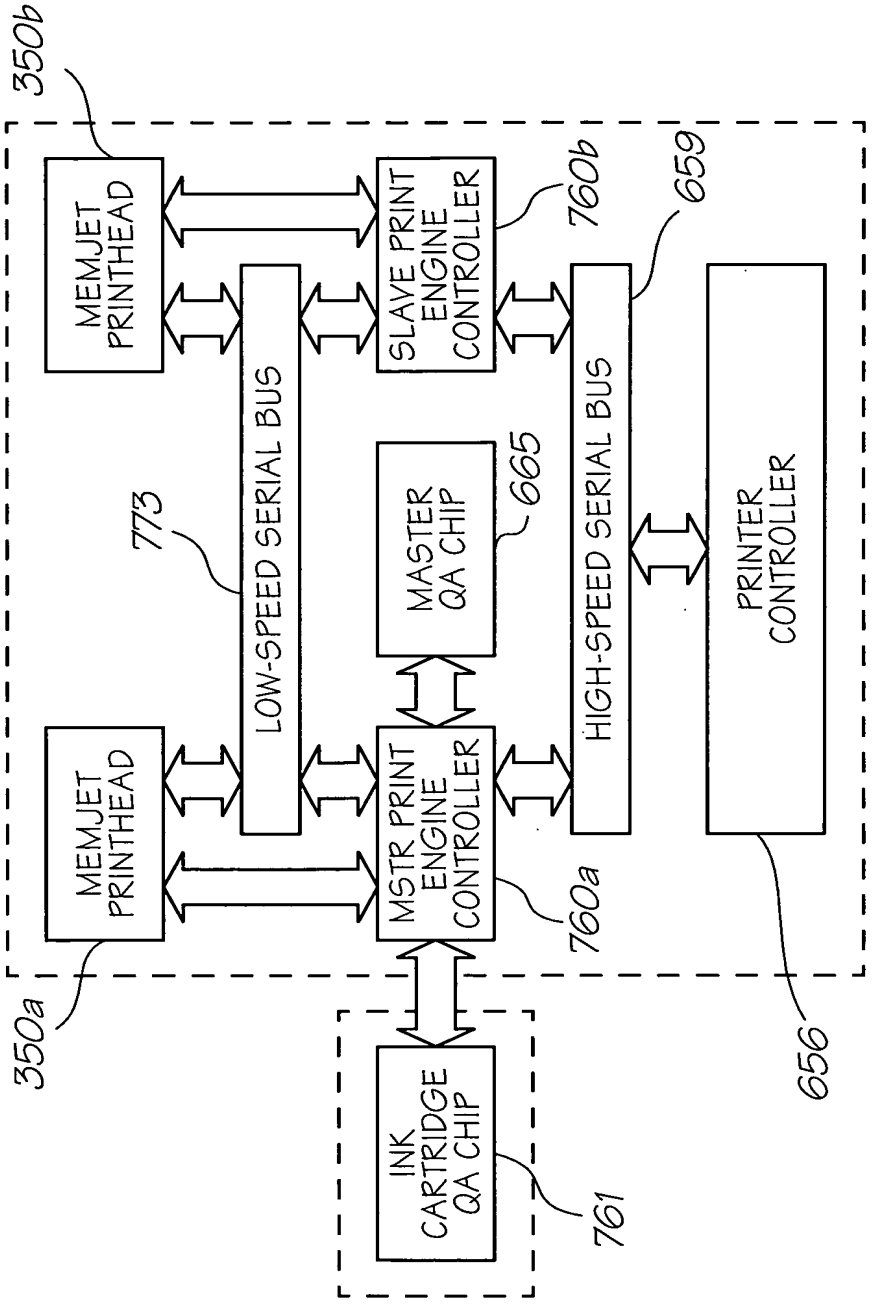

350b
MEMJET PRINTHEAD
SLAVE PRINT ENGINE CONTROLLER
760b
659
773
LOW-SPEED SERIAL BUS
MASTER QA CHIP
665
HIGH-SPEED SERIAL BUS
PRINTER CONTROLLER
MEMJET PRINTHEAD
MSTR PRINT ENGINE CONTROLLER
760a
350a
656
INK CARTRIDGE QA CHIP
761

FIG. 15

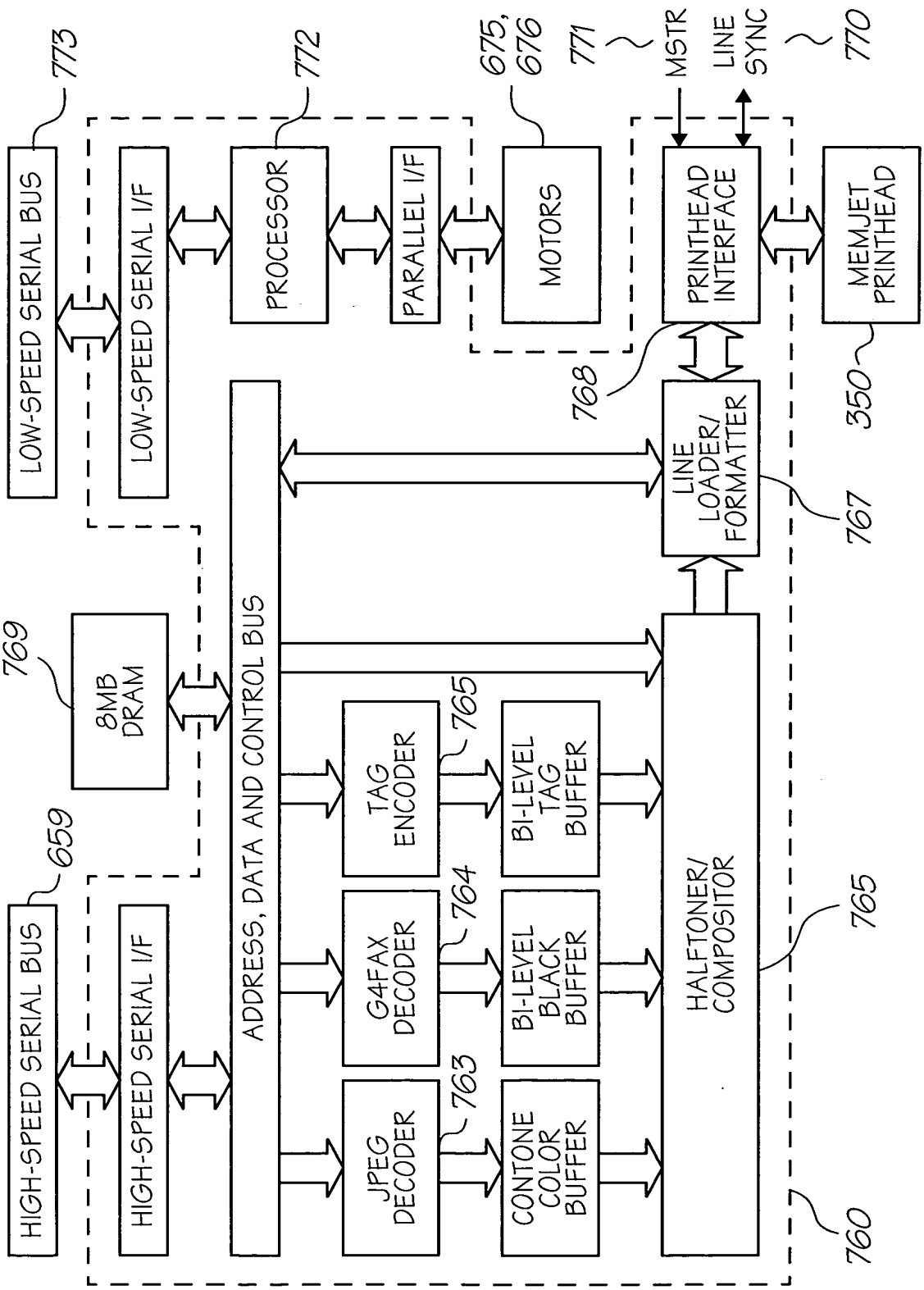

LOW-SPEED SERIAL BUS
773
LOW-SPEED SERIAL I/F
PROCESSOR
772
PARALLEL I/F
675, 676
MOTORS
771
MSTR
LINE SYNC
770
PRINTHEAD INTERFACE
MEMJET PRINTHEAD
768
350
LINE LOADER/ FORMATTER
767
769
8MB DRAM
ADDRESS, DATA AND CONTROL BUS
659
HIGH-SPEED SERIAL BUS
HIGH-SPEED SERIAL I/F
TAG ENCODER
765
BI-LEVEL TAG BUFFER
G4FAX DECODER
764
BI-LEVEL BLACK BUFFER
JPEG DECODER
763
CONTONE COLOR BUFFER
HALFTONER/ COMPOSITOR
765
760

FIG. 16

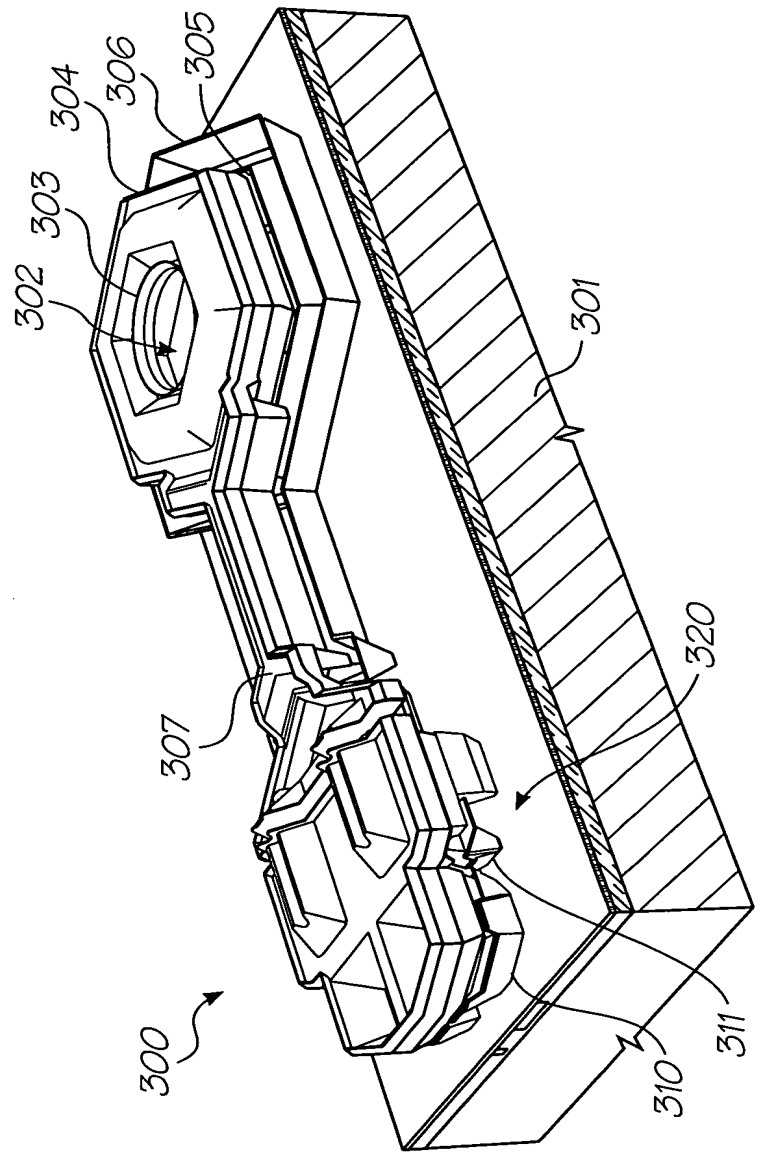


FIG. 17

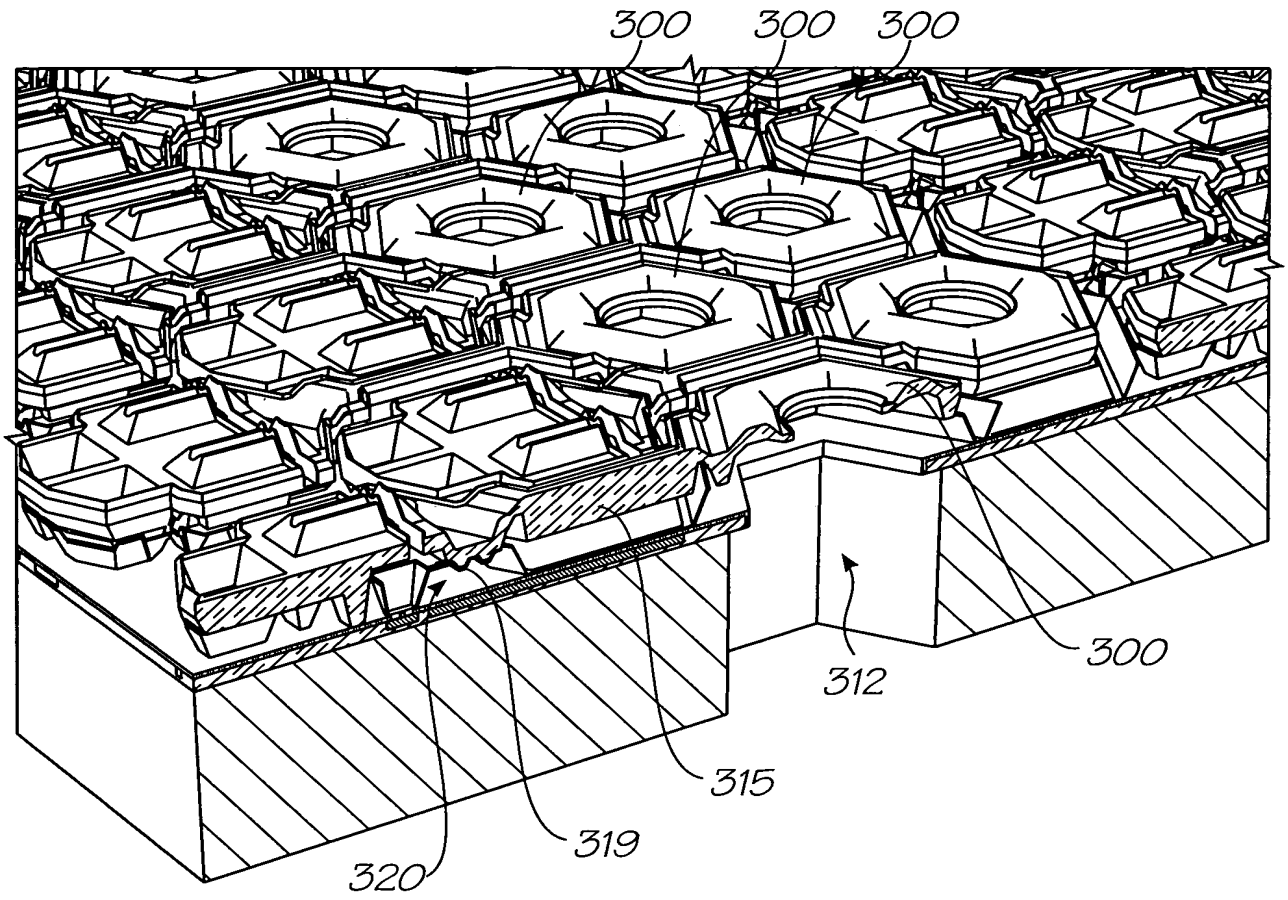


FIG. 18

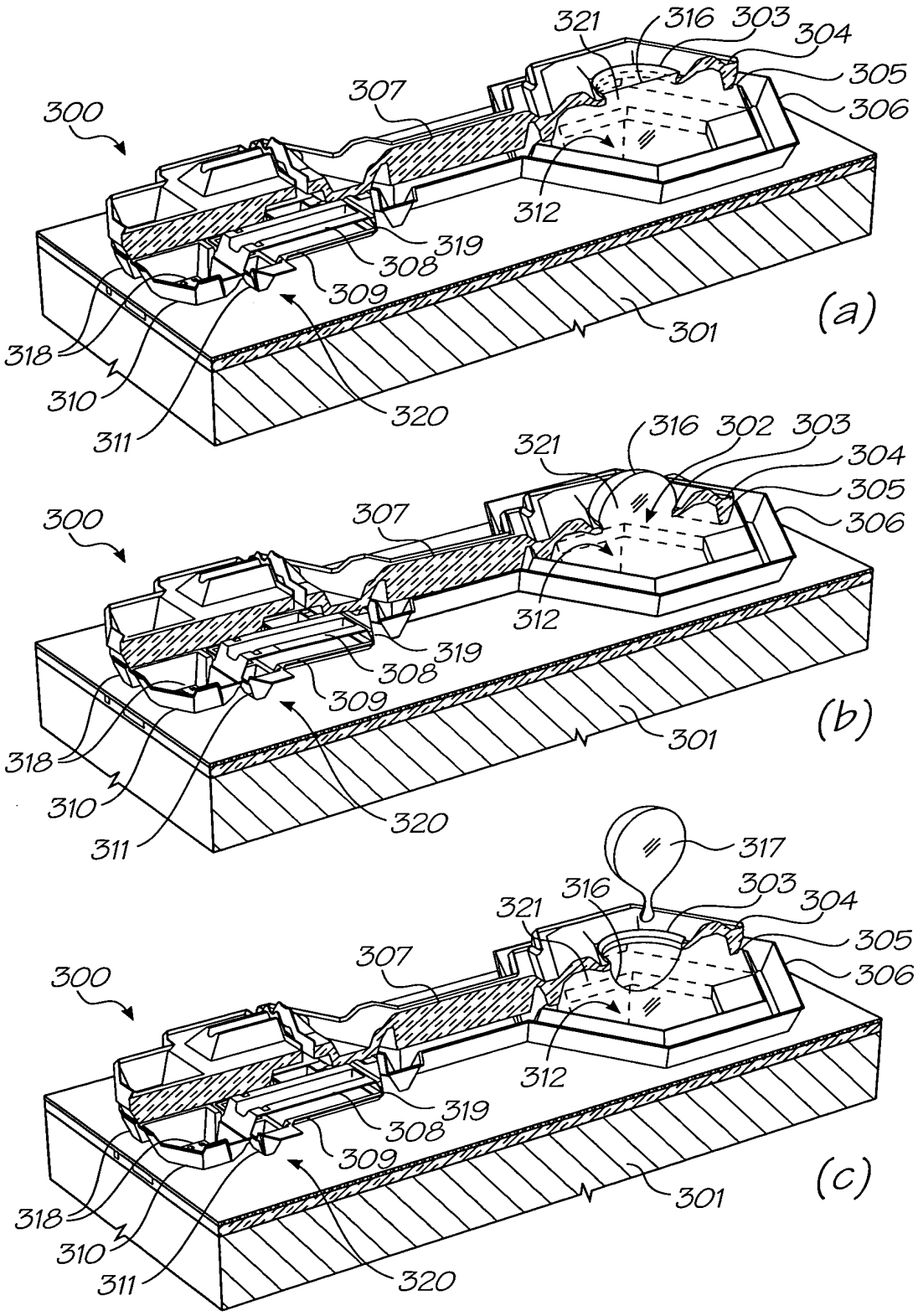

321
316
303
304
305
306
307
300
312
319
308
309
318
310
311
320
301
(a)
316
302
303
304
305
306
321
307
300
312
319
308
309
318
310
311
320
301
(b)
317
316
303
304
321
305
307
306
300
312
319
308
309
318
310
311
320
301
(c)

FIG. 19

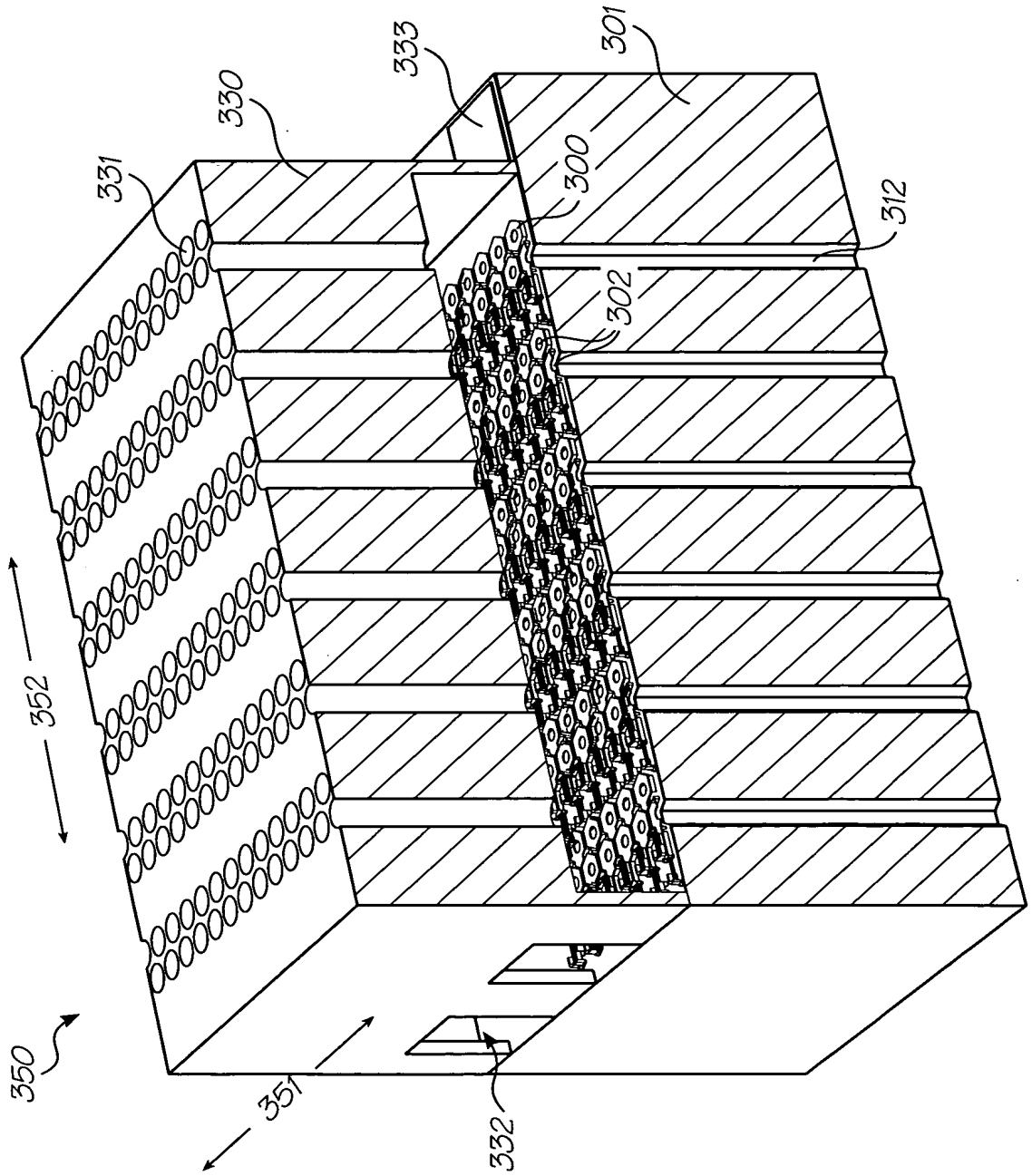


FIG. 20

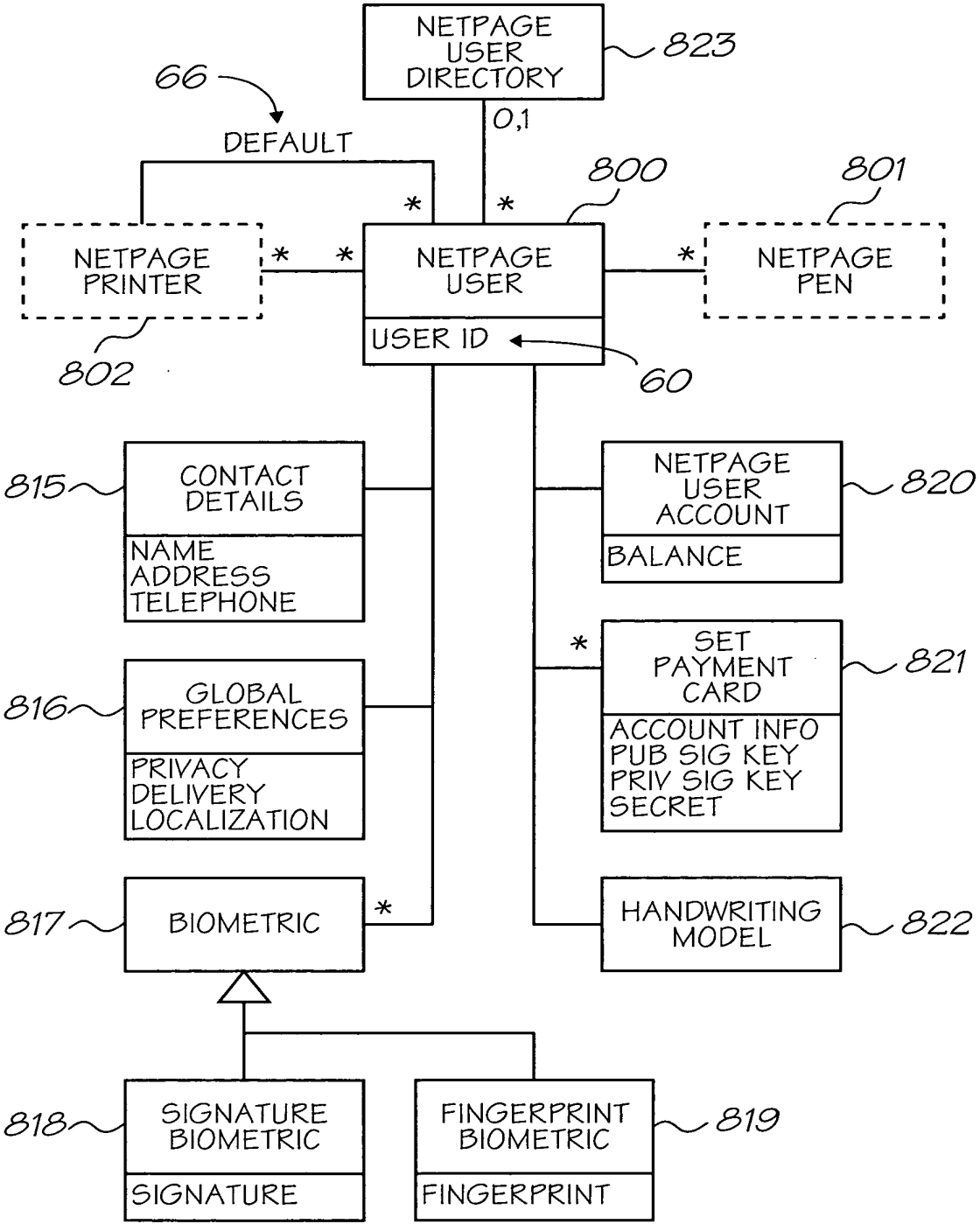

NETPAGE USER DIRECTORY
823
66
DEFAULT
0,1
800
801
NETPAGE PRINTER
NETPAGE USER
NETPAGE PEN
USER ID
60
802
815
CONTACT DETAILS
NAME
ADDRESS
TELEPHONE
NETPAGE USER ACCOUNT
820
BALANCE
816
GLOBAL PREFERENCES
PRIVACY
DELIVERY
LOCALIZATION
SET PAYMENT CARD
821
ACCOUNT INFO
PUB SIG KEY
PRIV SIG KEY
SECRET
817
BIOMETRIC
HANDWRITING MODEL
822
818
SIGNATURE BIOMETRIC
SIGNATURE
FINGERPRINT BIOMETRIC
819
FINGERPRINT

FIG. 21

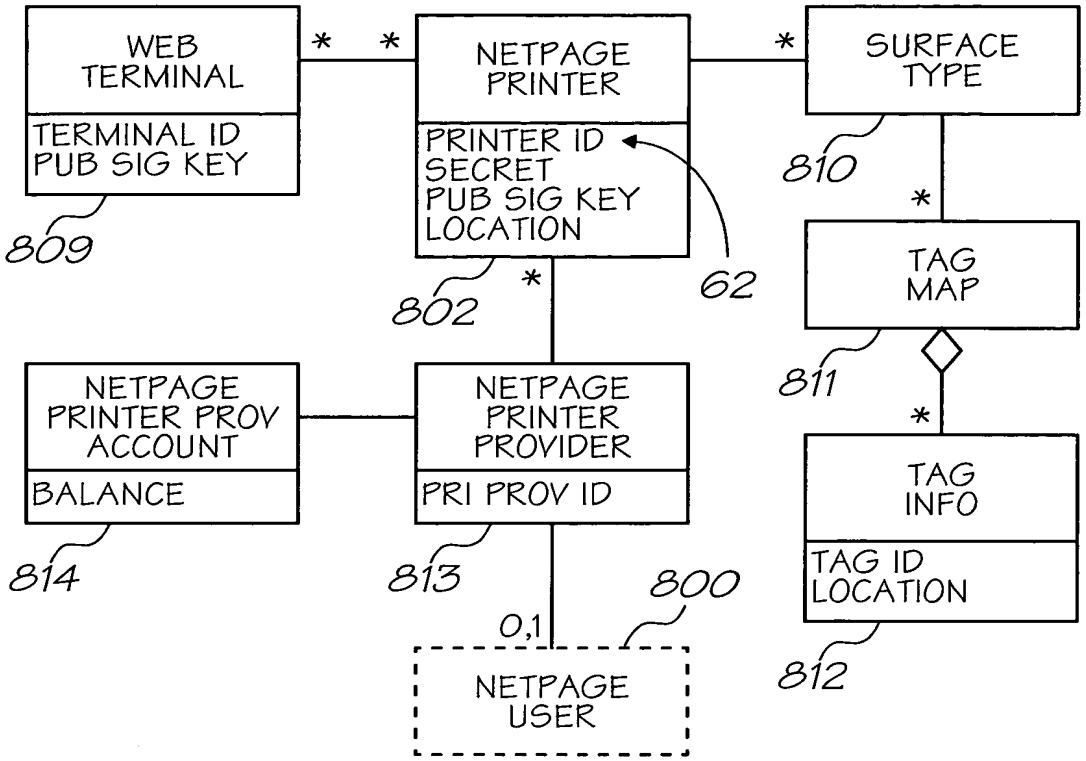

WEB TERMINAL
TERMINAL ID
PUB SIG KEY
809
NETPAGE PRINTER
PRINTER ID
SECRET
PUB SIG KEY
LOCATION
802
62
SURFACE TYPE
810
TAG MAP
811
TAG INFO
TAG ID
LOCATION
812
NETPAGE PRINTER PROV ACCOUNT
BALANCE
814
NETPAGE PRINTER PROVIDER
PRI PROV ID
813
800
NETPAGE USER
0,1
*

FIG. 22

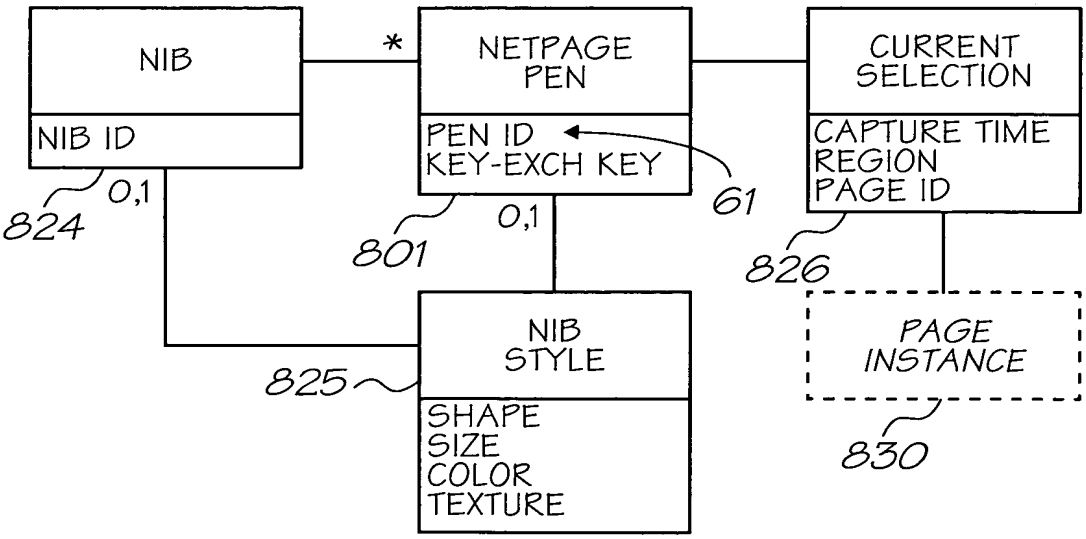

NIB
NIB ID
824
0,1
NETPAGE PEN
PEN ID
KEY-EXCH KEY
801
61
CURRENT SELECTION
CAPTURE TIME
REGION
PAGE ID
826
NIB STYLE
825
SHAPE
SIZE
COLOR
TEXTURE
PAGE INSTANCE
830
*

FIG. 23

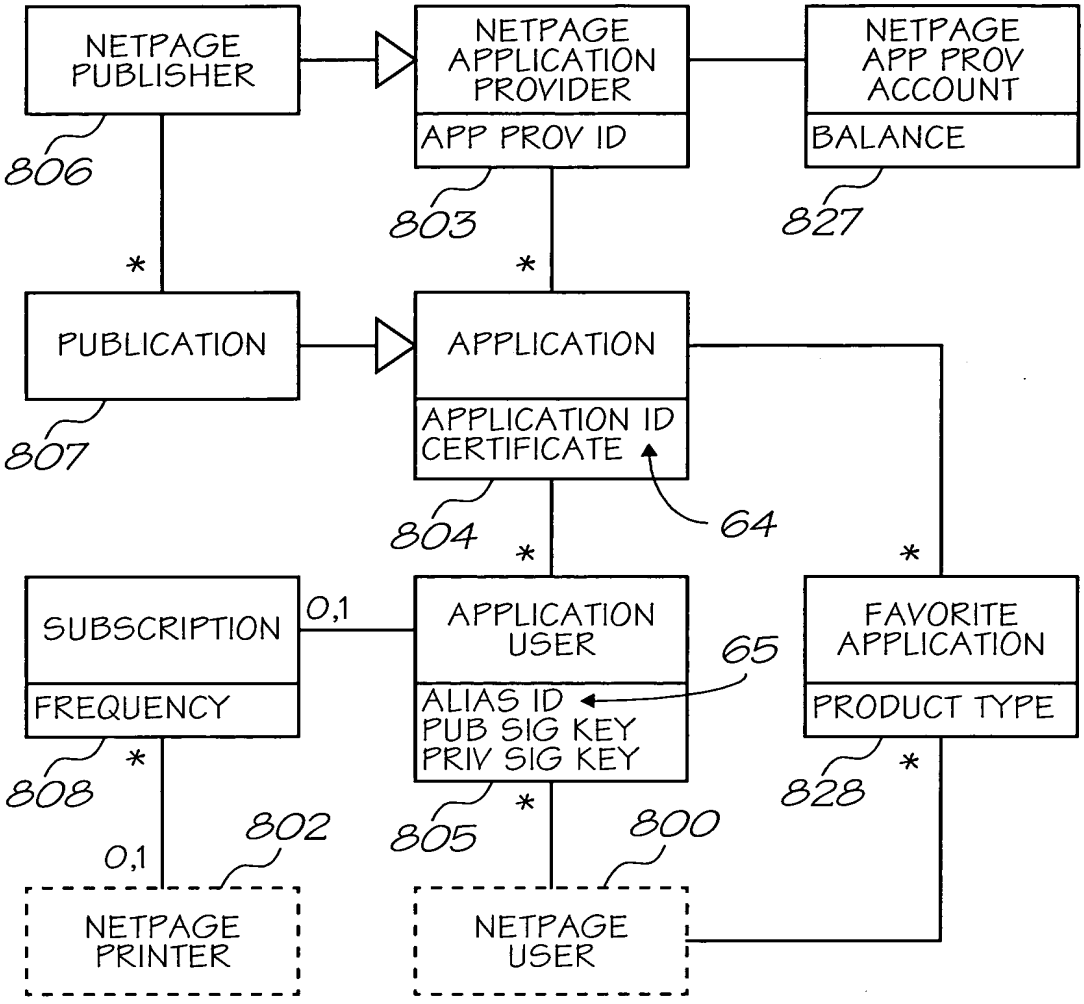

NETPAGE PUBLISHER
NETPAGE APPLICATION PROVIDER
APP PROV ID
NETPAGE APP PROV ACCOUNT
BALANCE
806
803
827
*
*
PUBLICATION
APPLICATION
APPLICATION ID
CERTIFICATE
807
804
64
*
*
SUBSCRIPTION
0,1
APPLICATION USER
65
FAVORITE APPLICATION
FREQUENCY
ALIAS ID
PUB SIG KEY
PRIV SIG KEY
PRODUCT TYPE
808
*
805
*
828
*
0,1
802
800
NETPAGE PRINTER
NETPAGE USER

FIG. 24

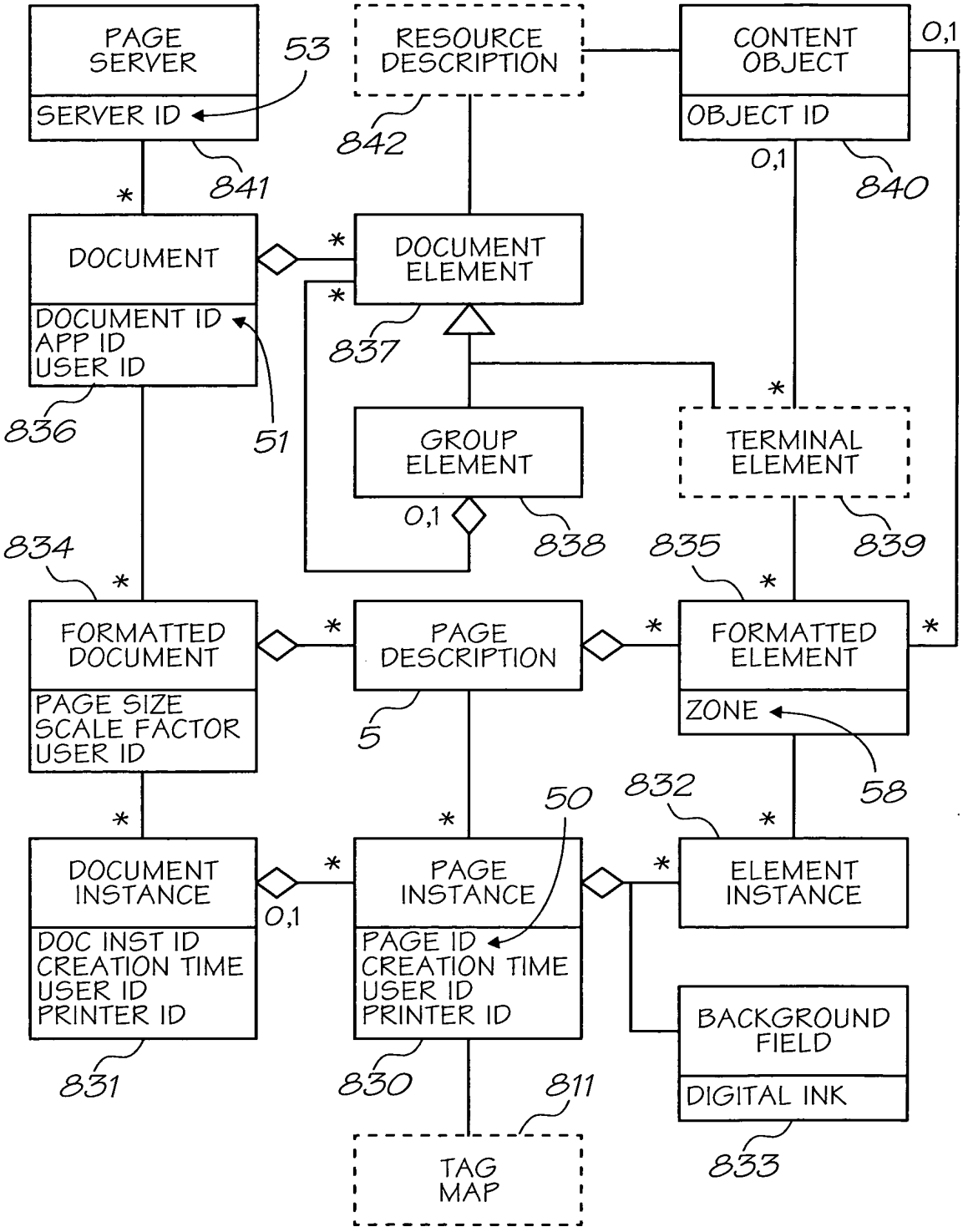

PAGE SERVER
SERVER ID
53
RESOURCE DESCRIPTION
842
CONTENT OBJECT
OBJECT ID
0,1
0,1
841
840
DOCUMENT
DOCUMENT ID
APP ID
USER ID
836
51
DOCUMENT ELEMENT
837
GROUP ELEMENT
0,1
838
TERMINAL ELEMENT
839
834
835
FORMATTED DOCUMENT
PAGE SIZE
SCALE FACTOR
USER ID
PAGE DESCRIPTION
5
FORMATTED ELEMENT
ZONE
58
832
50
DOCUMENT INSTANCE
DOC INST ID
CREATION TIME
USER ID
PRINTER ID
0,1
PAGE INSTANCE
PAGE ID
CREATION TIME
USER ID
PRINTER ID
ELEMENT INSTANCE
BACKGROUND FIELD
DIGITAL INK
831
830
811
833
TAG MAP

FIG. 25

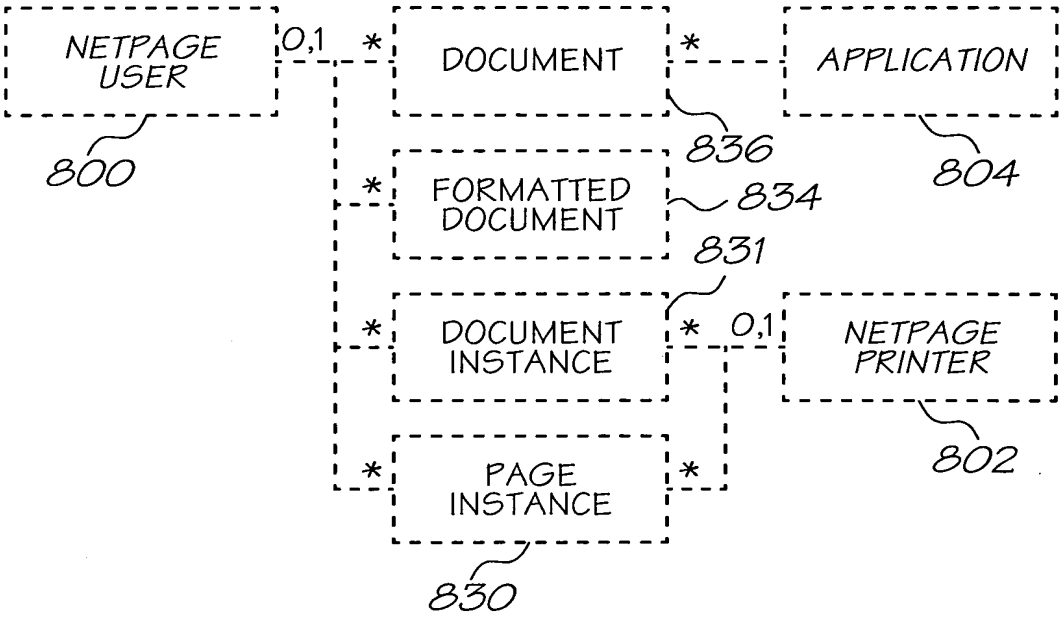


FIG. 26

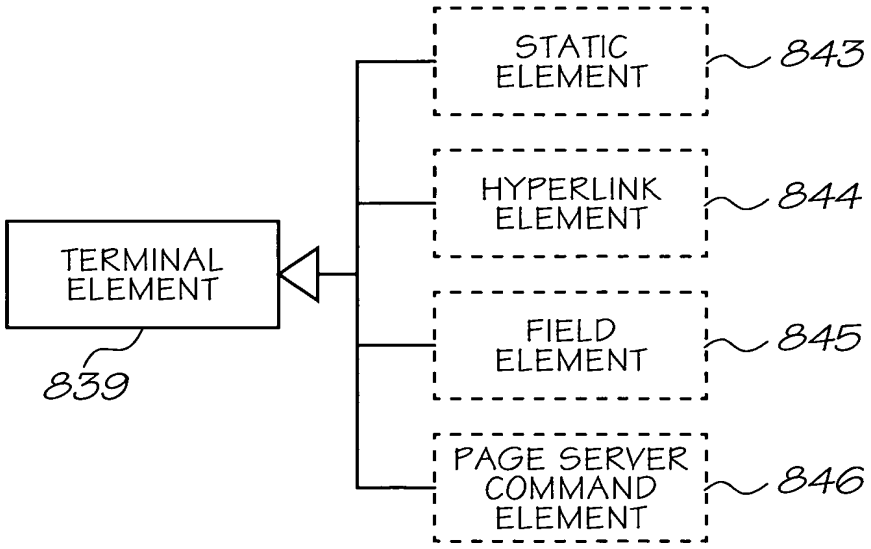


FIG. 27

09/575186 - 050300

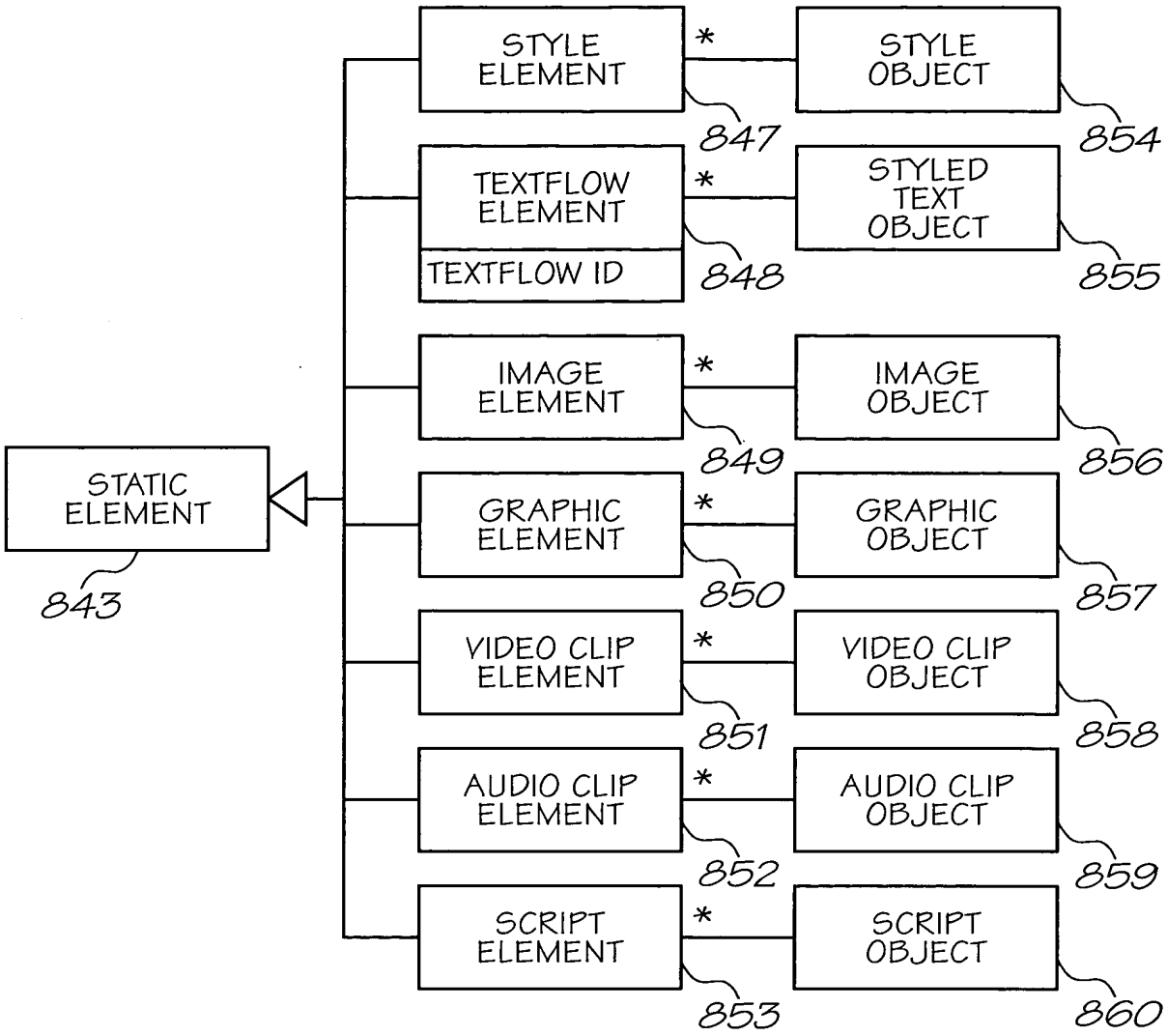

STYLE ELEMENT
*
STYLE OBJECT
847
854
TEXTFLOW ELEMENT
TEXTFLOW ID
*
STYLED TEXT OBJECT
848
855
IMAGE ELEMENT
*
IMAGE OBJECT
849
856
STATIC ELEMENT
843
GRAPHIC ELEMENT
*
GRAPHIC OBJECT
850
857
VIDEO CLIP ELEMENT
*
VIDEO CLIP OBJECT
851
858
AUDIO CLIP ELEMENT
*
AUDIO CLIP OBJECT
852
859
SCRIPT ELEMENT
*
SCRIPT OBJECT
853
860

FIG. 28

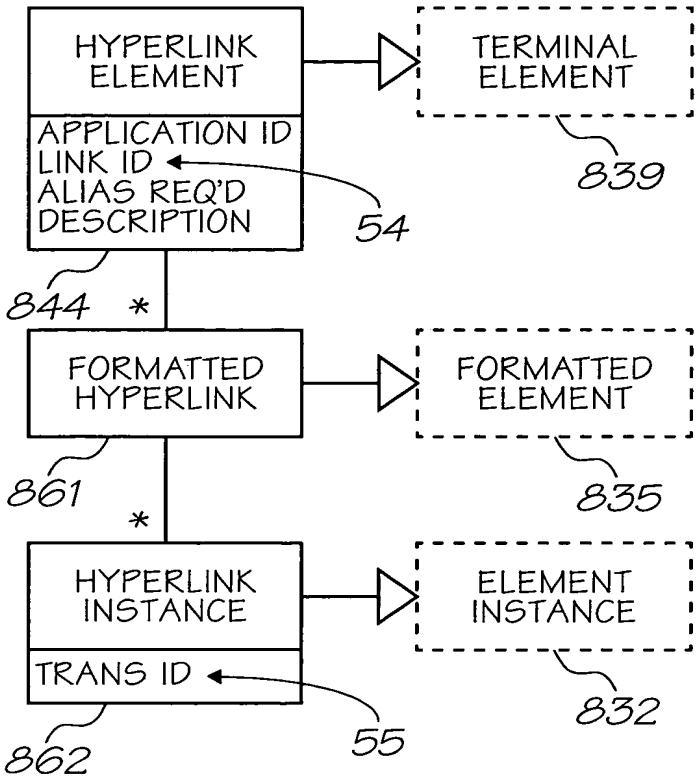


FIG. 29

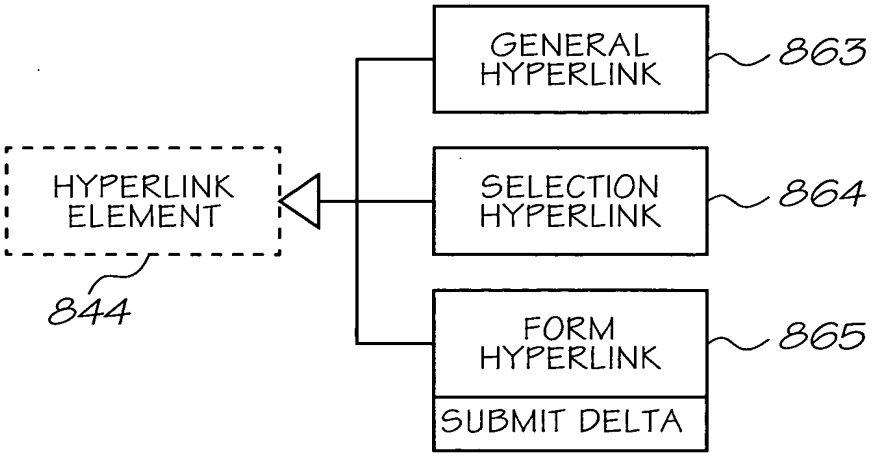


FIG. 30

09/556,809 05/23/2000

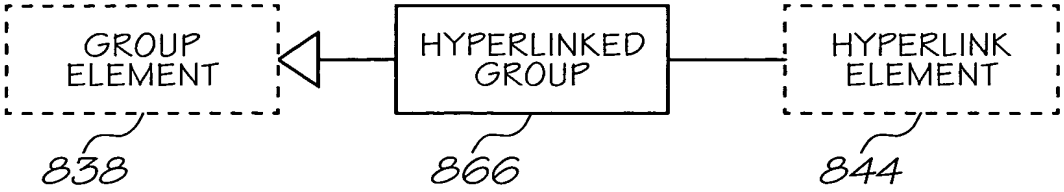

GROUP ELEMENT
HYPERLINKED GROUP
HYPERLINK ELEMENT
838
866
844

FIG. 31

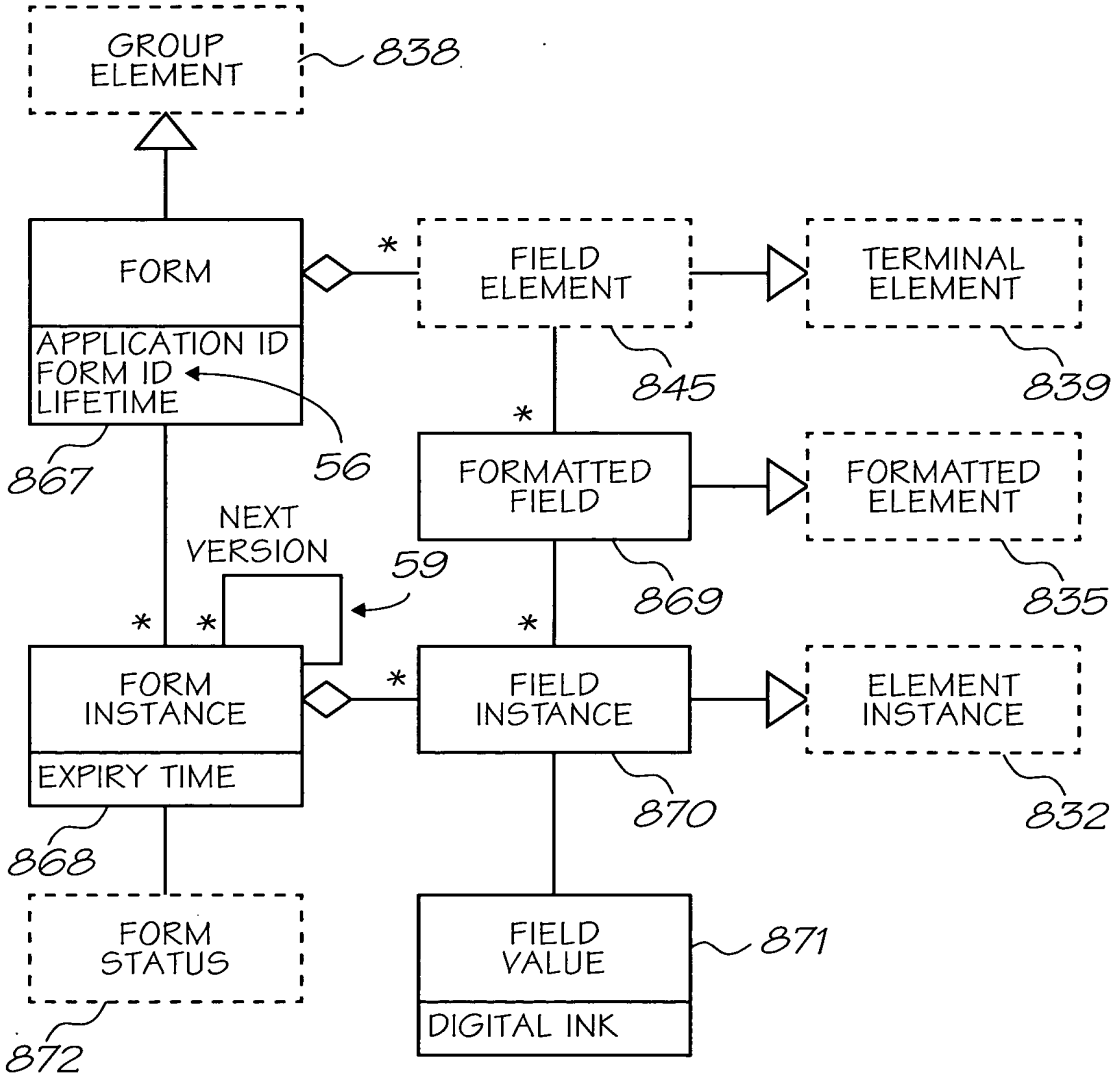

GROUP ELEMENT
838
FORM
APPLICATION ID
FORM ID
LIFETIME
867
56
FIELD ELEMENT
845
TERMINAL ELEMENT
839
FORMATTED FIELD
869
FORMATTED ELEMENT
835
NEXT VERSION
59
FORM INSTANCE
EXPIRY TIME
868
FIELD INSTANCE
870
ELEMENT INSTANCE
832
FORM STATUS
872
FIELD VALUE
DIGITAL INK
871

FIG. 32

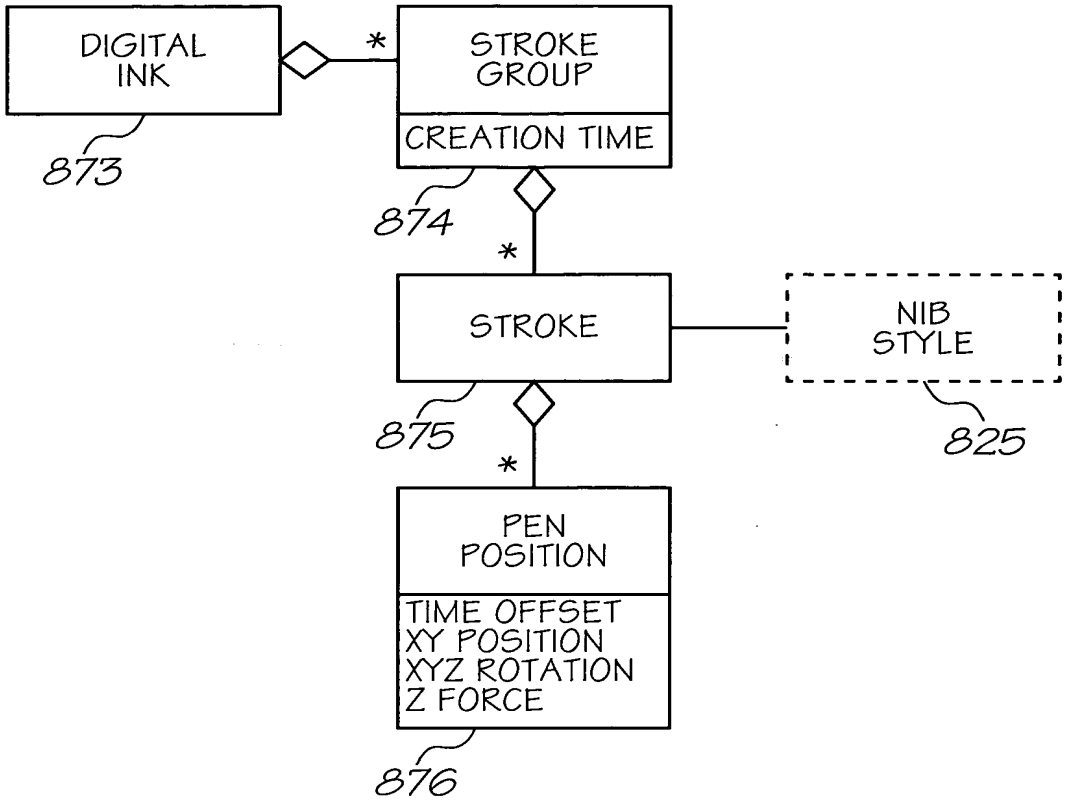


FIG. 33

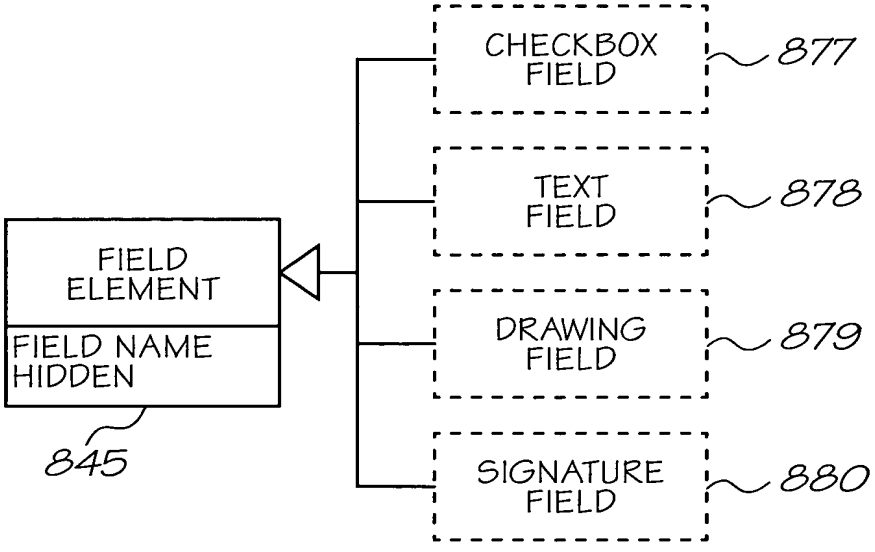


FIG. 34

WO 2006/095035 PCT/GB2006/000845

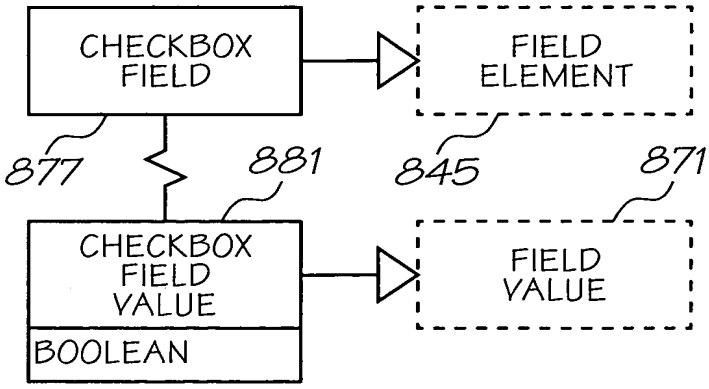


FIG. 35

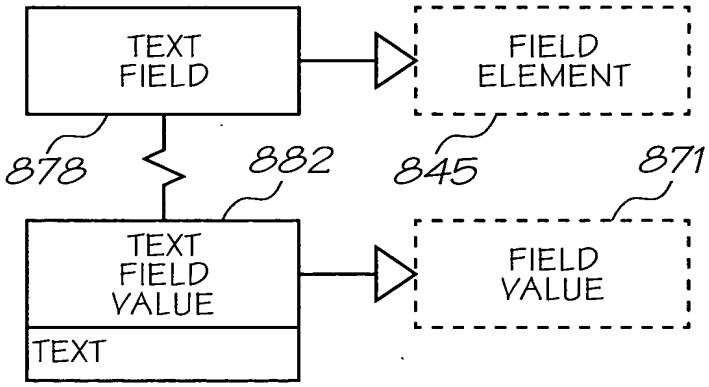


FIG. 36

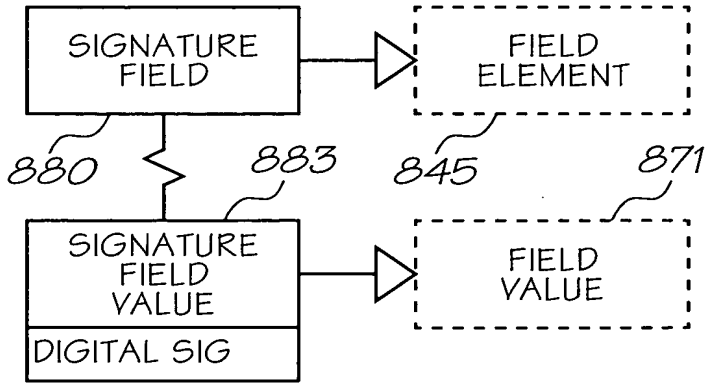


FIG. 37

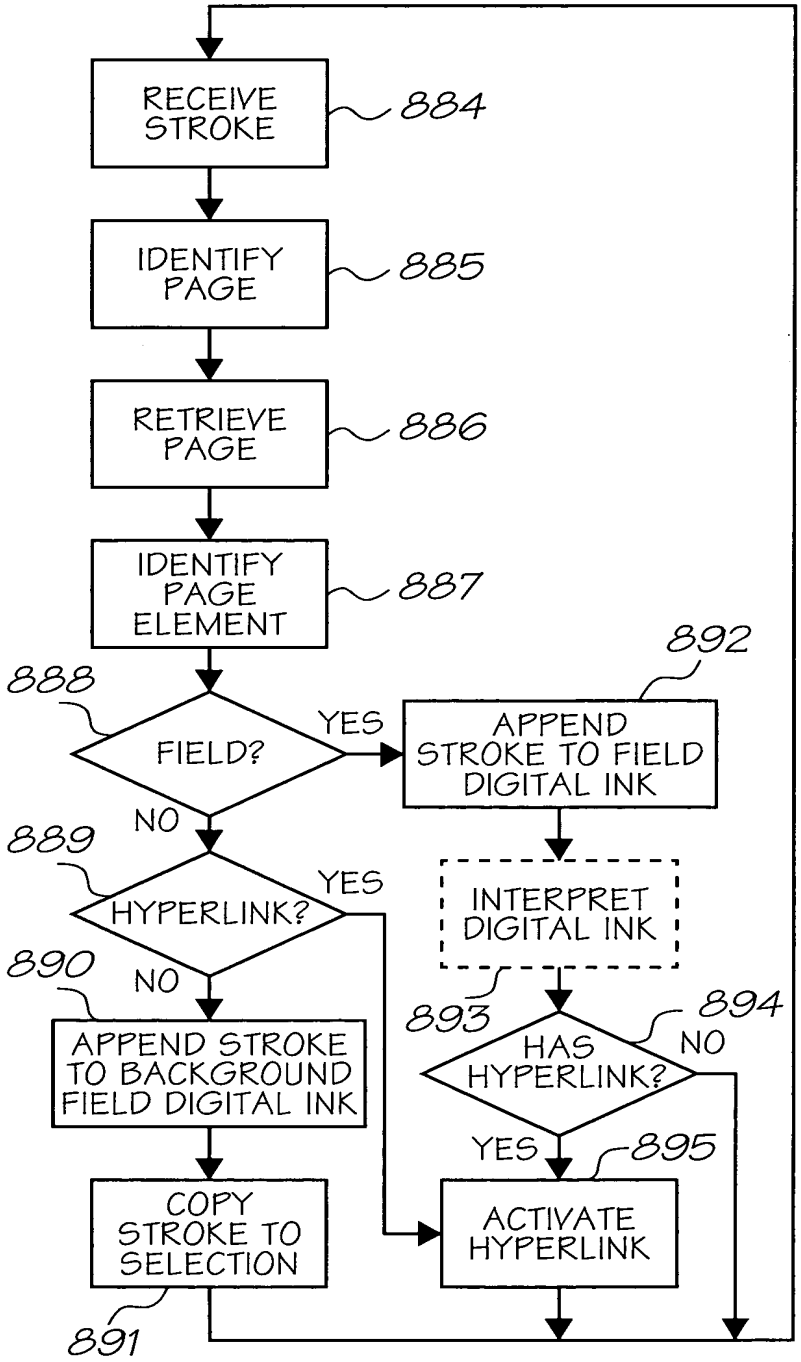

RECEIVE STROKE
884
IDENTIFY PAGE
885
RETRIEVE PAGE
886
IDENTIFY PAGE ELEMENT
887
888
FIELD?
YES
892
APPEND STROKE TO FIELD DIGITAL INK
NO
889
HYPERLINK?
YES
INTERPRET DIGITAL INK
890
NO
893
894
HAS HYPERLINK?
NO
APPEND STROKE TO BACKGROUND FIELD DIGITAL INK
YES
895
COPY STROKE TO SELECTION
ACTIVATE HYPERLINK
891

FIG. 38

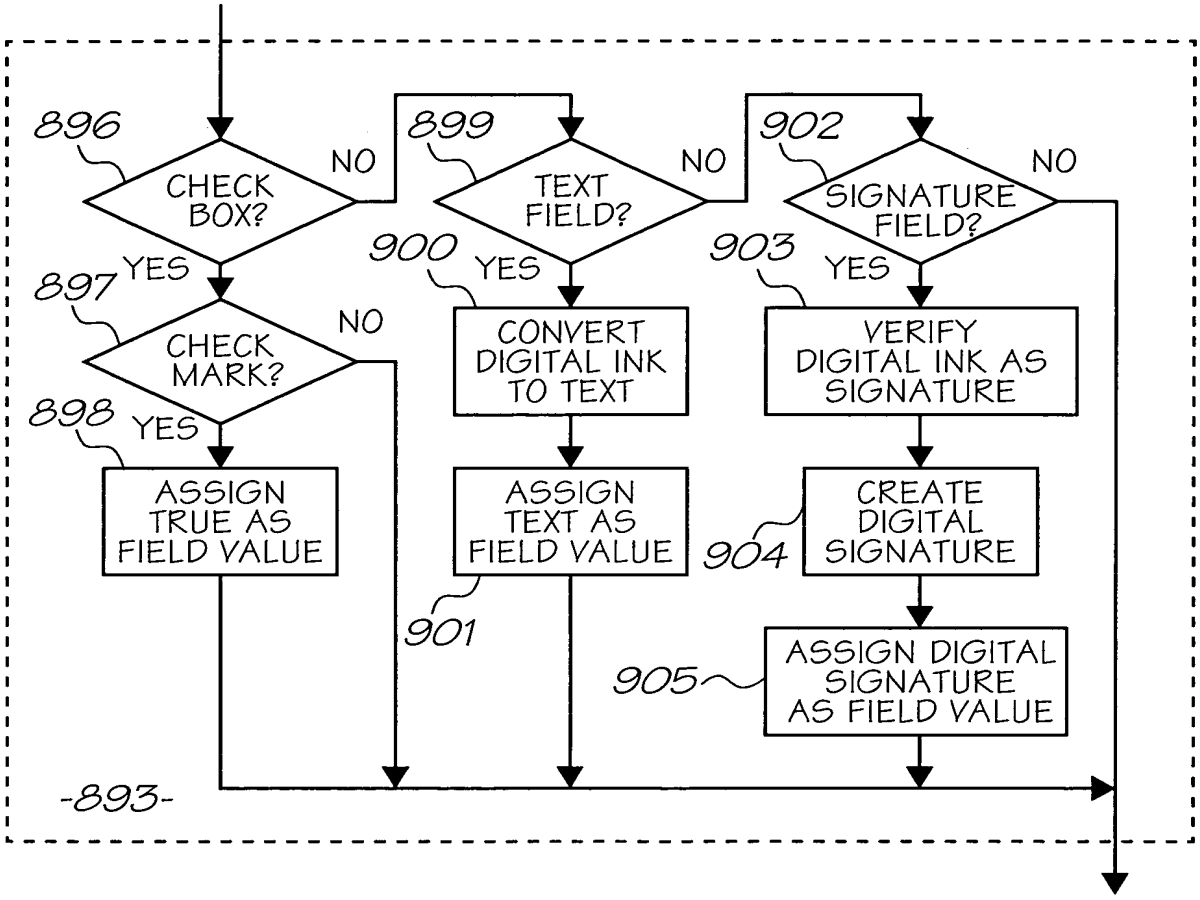

896
CHECK BOX?
NO
899
TEXT FIELD?
NO
902
SIGNATURE FIELD?
NO
897
YES
CHECK MARK?
NO
900
YES
CONVERT DIGITAL INK TO TEXT
903
YES
VERIFY DIGITAL INK AS SIGNATURE
898
YES
ASSIGN TRUE AS FIELD VALUE
ASSIGN TEXT AS FIELD VALUE
901
904
CREATE DIGITAL SIGNATURE
905
ASSIGN DIGITAL SIGNATURE AS FIELD VALUE
-893-

FIG. 38a

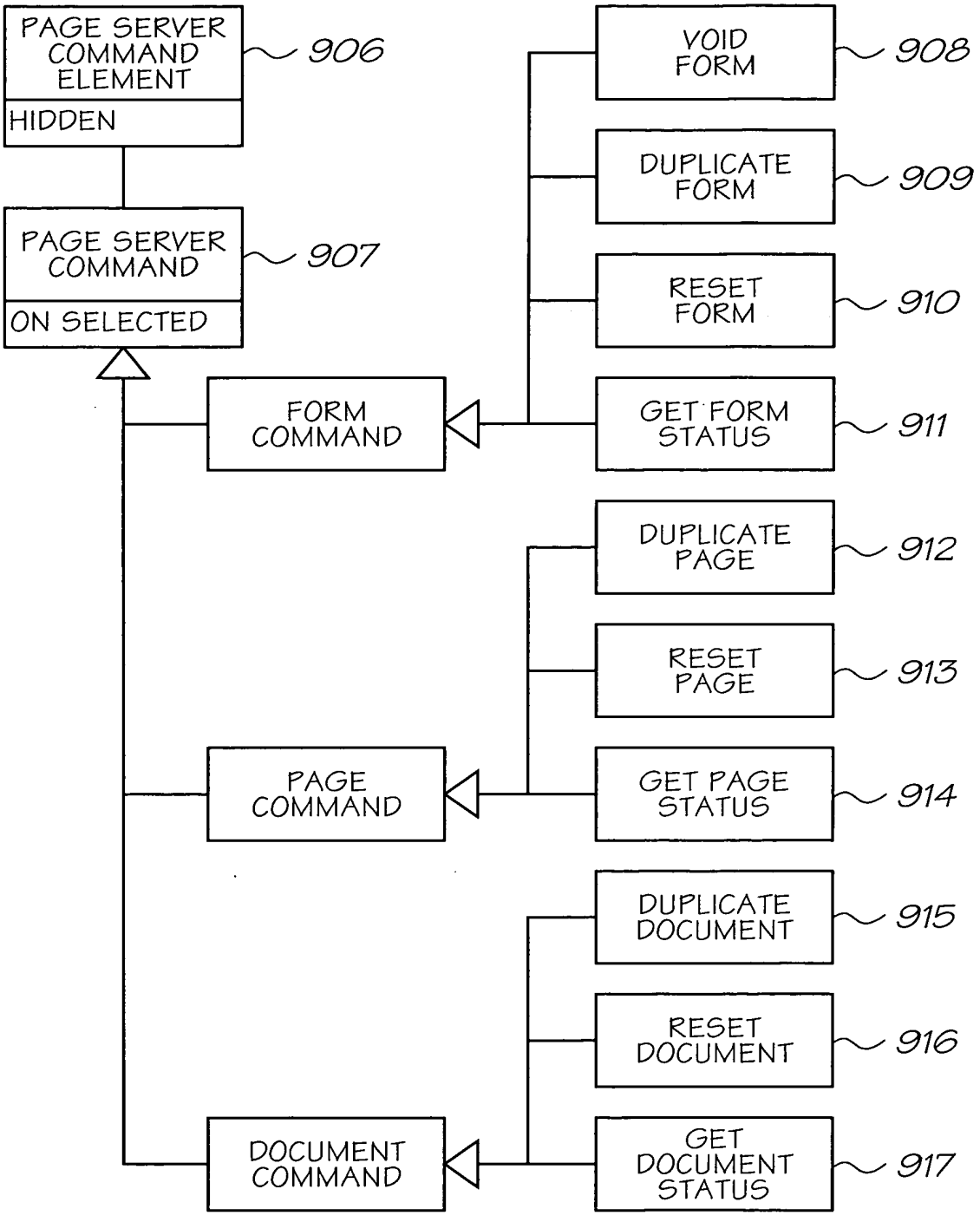

PAGE SERVER COMMAND ELEMENT
HIDDEN
906
PAGE SERVER COMMAND
ON SELECTED
907
FORM COMMAND
PAGE COMMAND
DOCUMENT COMMAND
VOID FORM
908
DUPLICATE FORM
909
RESET FORM
910
GET FORM STATUS
911
DUPLICATE PAGE
912
RESET PAGE
913
GET PAGE STATUS
914
DUPLICATE DOCUMENT
915
RESET DOCUMENT
916
GET DOCUMENT STATUS
917

FIG. 39

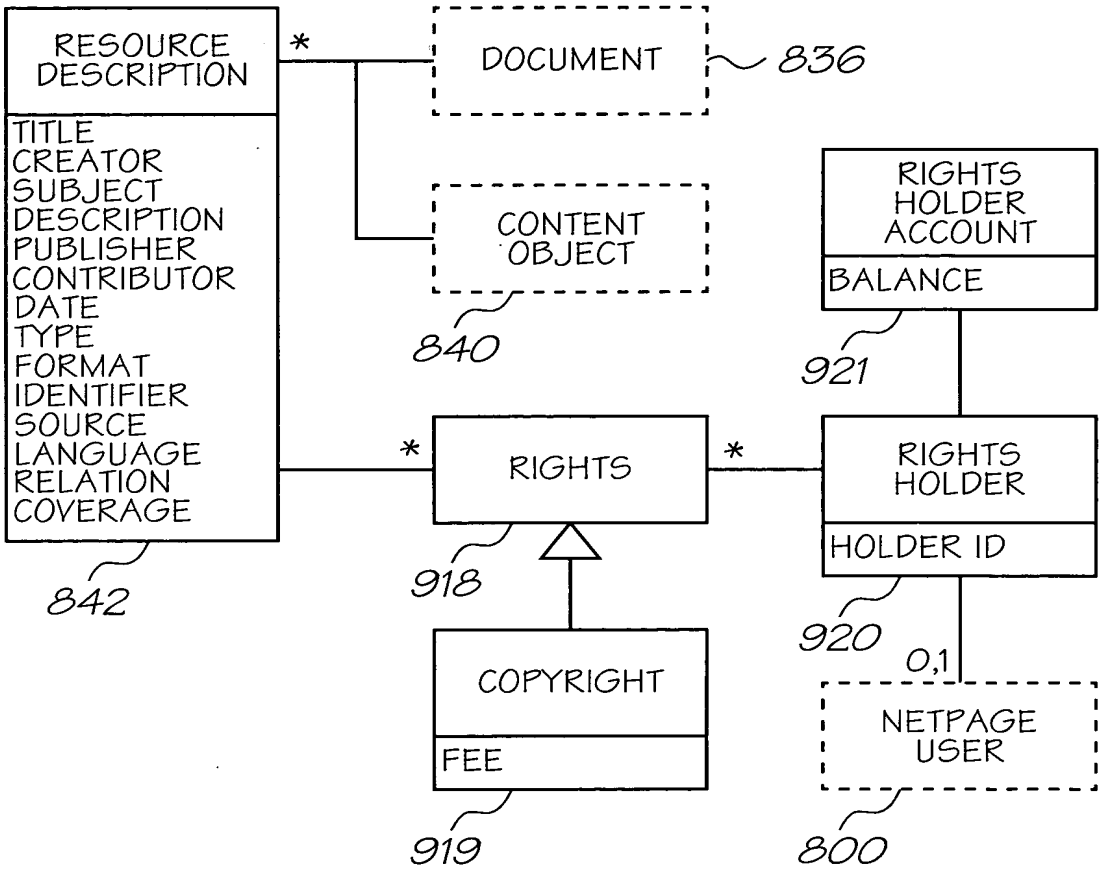

RESOURCE DESCRIPTION
TITLE
CREATOR
SUBJECT
DESCRIPTION
PUBLISHER
CONTRIBUTOR
DATE
TYPE
FORMAT
IDENTIFIER
SOURCE
LANGUAGE
RELATION
COVERAGE
842
*
DOCUMENT
836
CONTENT OBJECT
840
RIGHTS HOLDER ACCOUNT
BALANCE
921
*
RIGHTS
918
*
RIGHTS HOLDER
HOLDER ID
920
COPYRIGHT
FEE
919
0,1
NETPAGE USER
800

FIG. 40

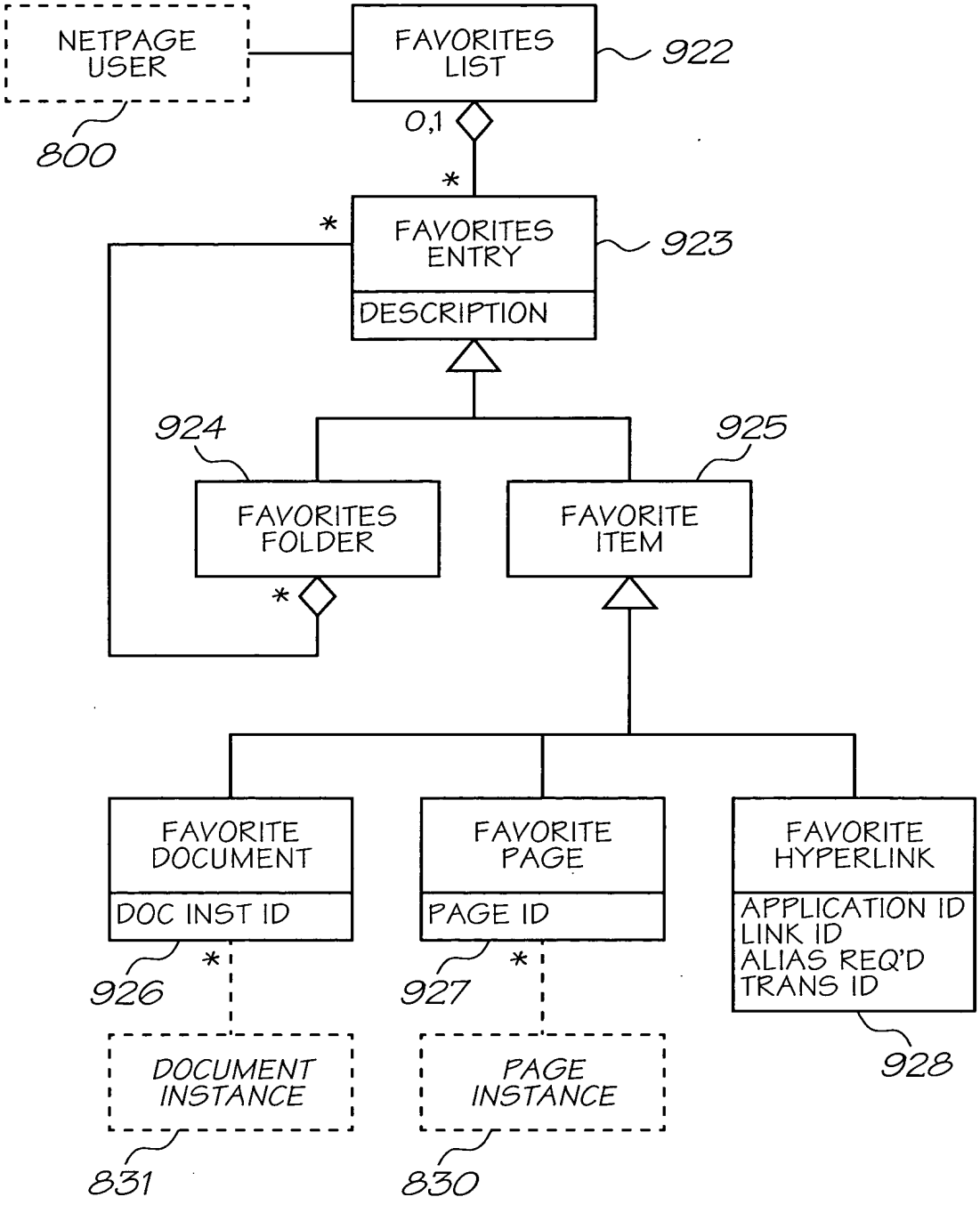


FIG. 41

PCT/US98/05202

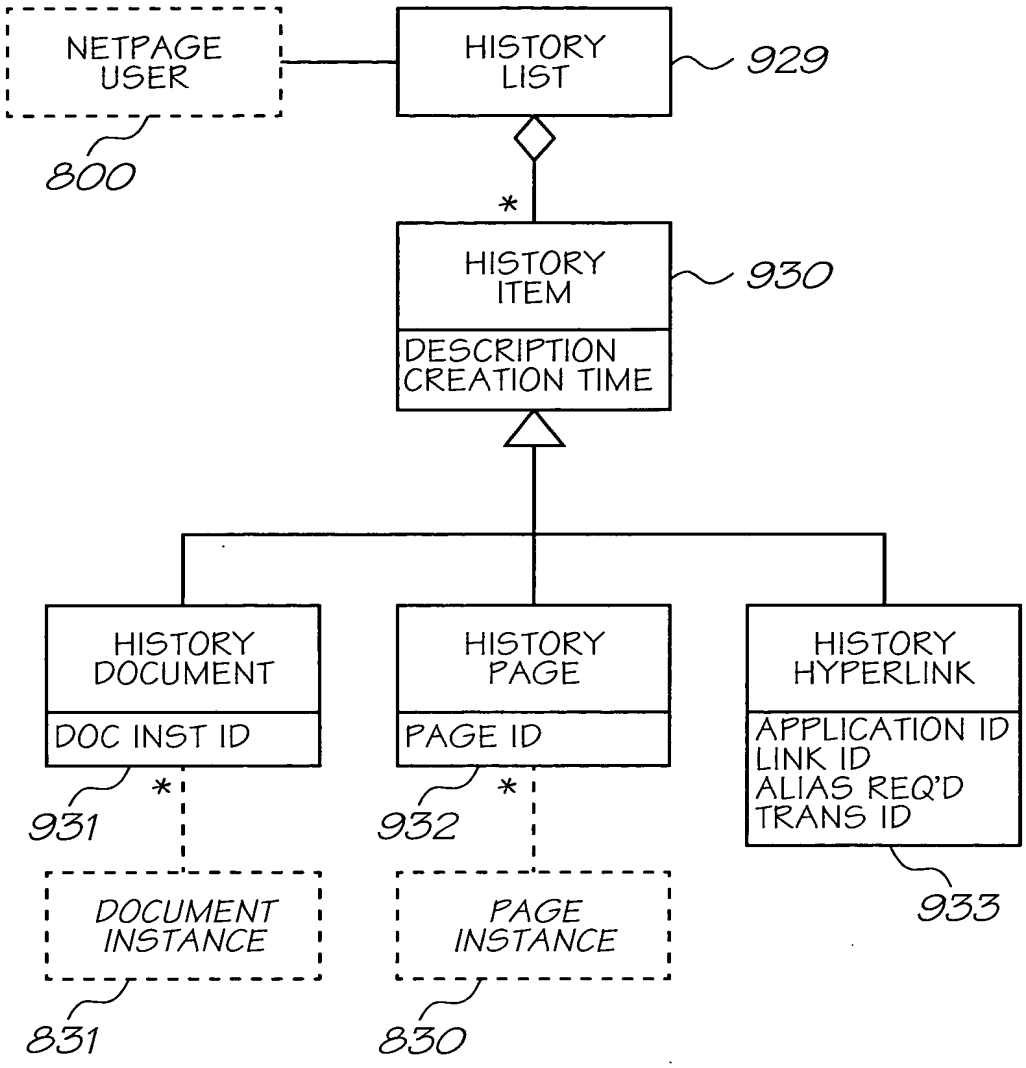


FIG. 42

09693059 102505

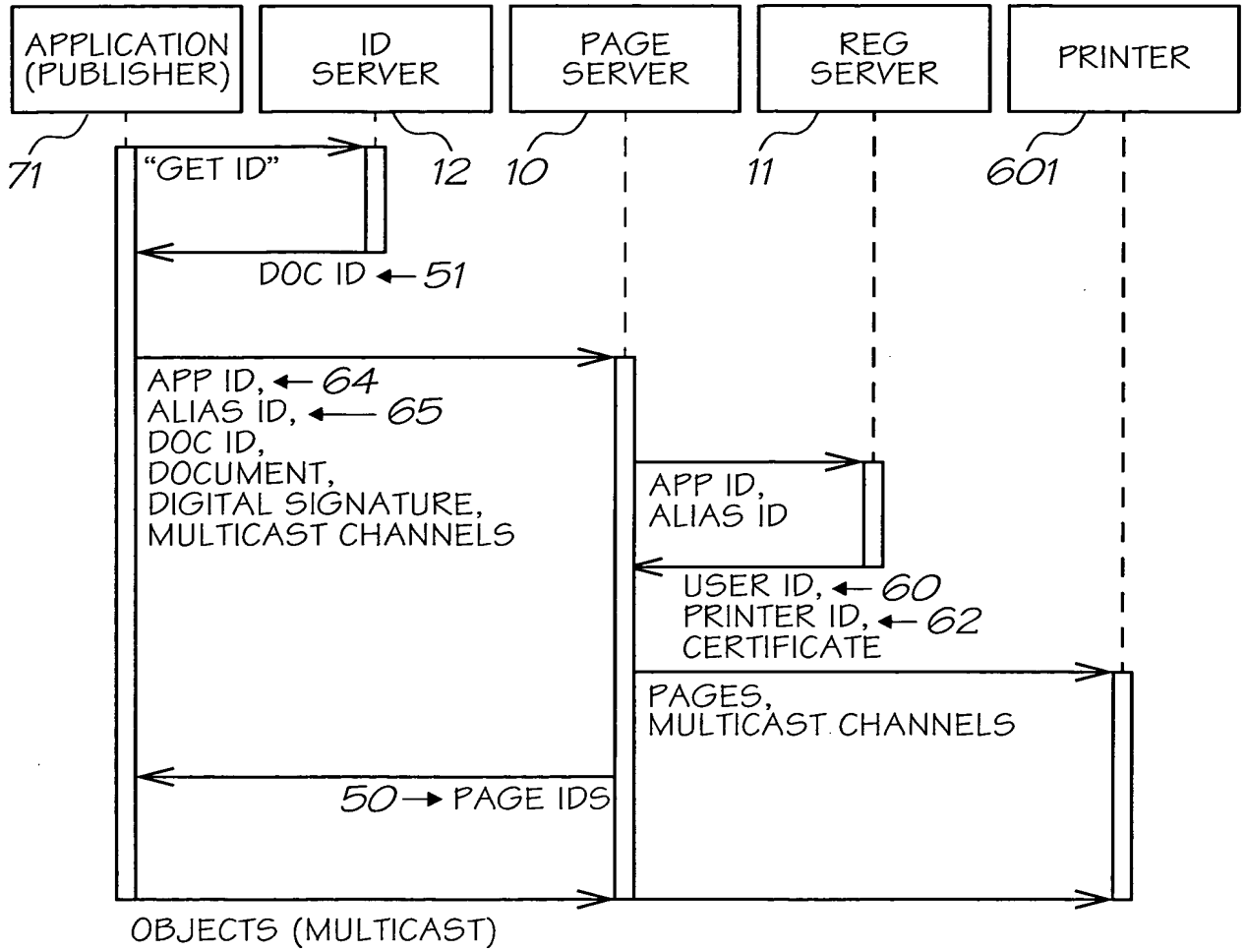

APPLICATION (PUBLISHER)
ID SERVER
PAGE SERVER
REG SERVER
PRINTER
71
12
10
11
601
"GET ID"
DOC ID ← 51
APP ID, ← 64
ALIAS ID, ← 65
DOC ID,
DOCUMENT,
DIGITAL SIGNATURE,
MULTICAST CHANNELS
APP ID,
ALIAS ID
USER ID, ← 60
PRINTER ID, ← 62
CERTIFICATE
PAGES,
MULTICAST CHANNELS
50 → PAGE IDS
OBJECTS (MULTICAST)

FIG. 43

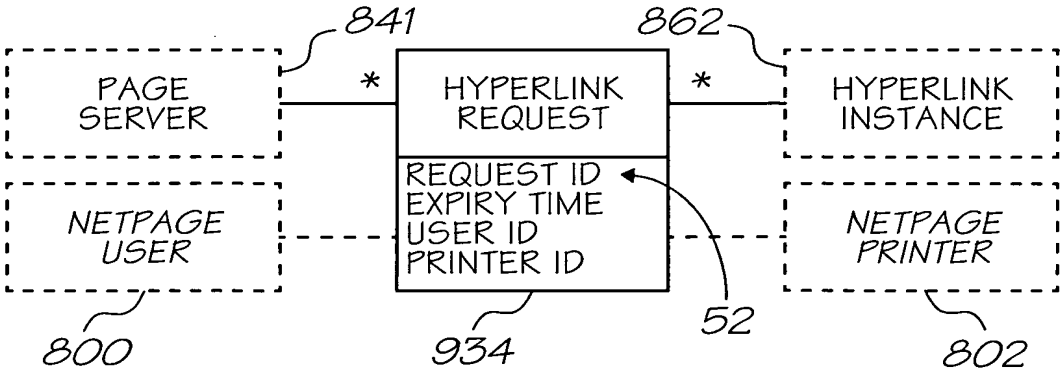

841
862
PAGE SERVER
*
HYPERLINK REQUEST
*
HYPERLINK INSTANCE
REQUEST ID
EXPIRY TIME
USER ID
PRINTER ID
NETPAGE USER
NETPAGE PRINTER
800
934
52
802

FIG. 44

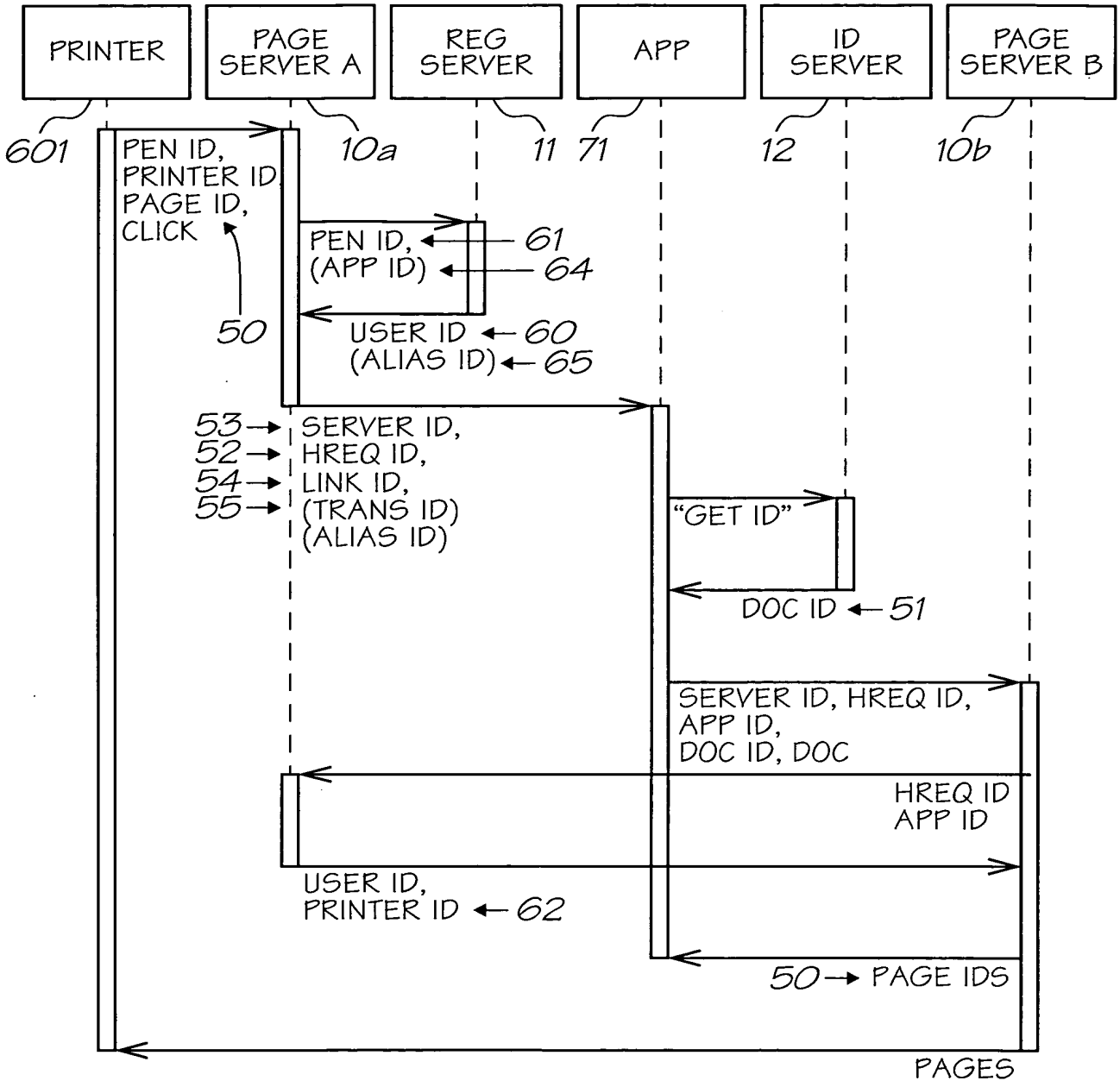

PRINTER
PAGE SERVER A
REG SERVER
APP
ID SERVER
PAGE SERVER B
601
10a
11
71
12
10b
PEN ID,
PRINTER ID
PAGE ID,
CLICK
50
PEN ID, 61
(APP ID) 64
USER ID 60
(ALIAS ID) 65
53 SERVER ID,
52 HREQ ID,
54 LINK ID,
55 (TRANS ID)
(ALIAS ID)
"GET ID"
DOC ID 51
SERVER ID, HREQ ID,
APP ID,
DOC ID, DOC
HREQ ID
APP ID
USER ID,
PRINTER ID 62
50 PAGE IDS
PAGES

FIG. 45

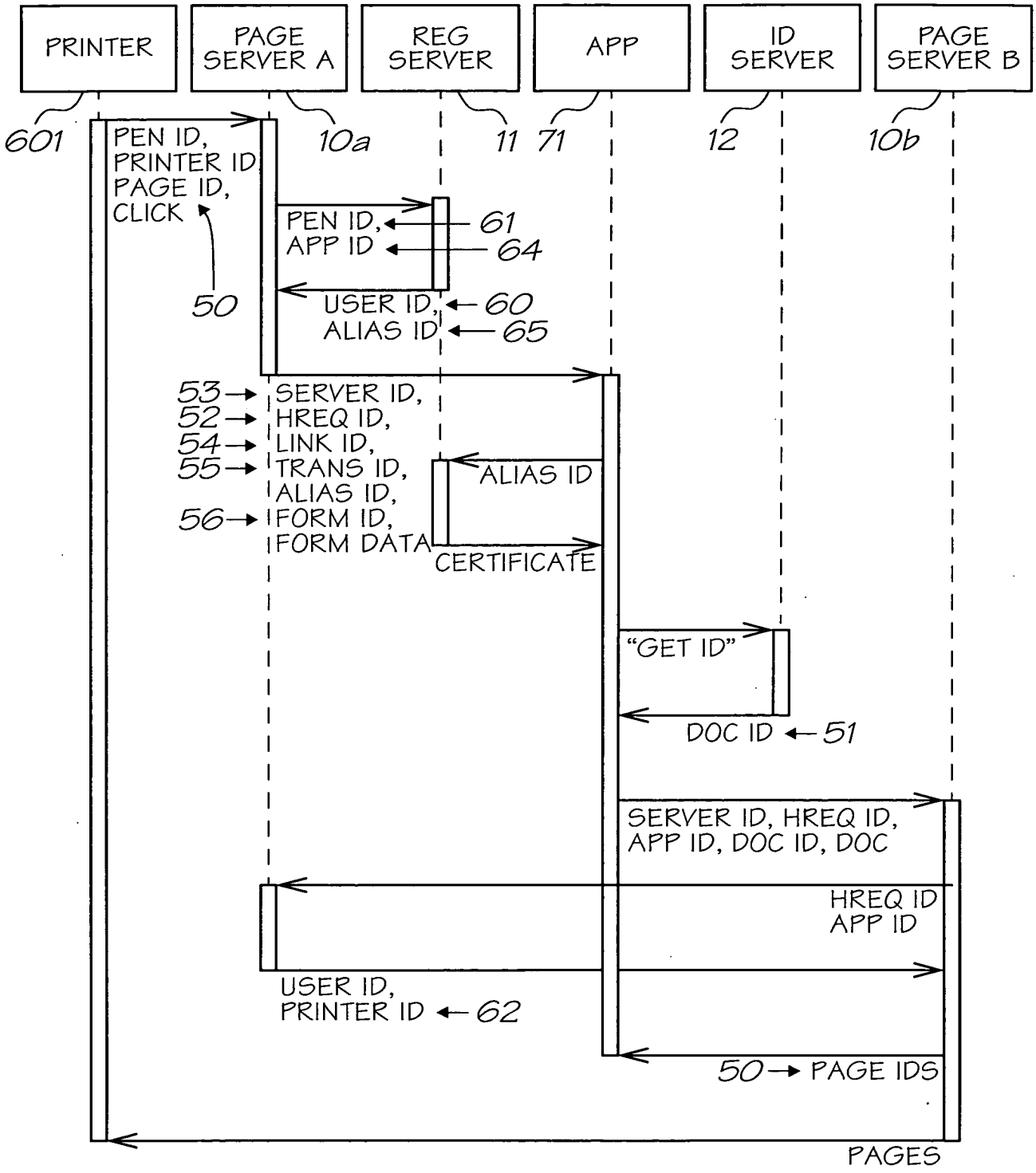

PRINTER
PAGE SERVER A
REG SERVER
APP
ID SERVER
PAGE SERVER B
601
10a
11
71
12
10b
PEN ID,
PRINTER ID
PAGE ID,
CLICK
50
PEN ID, 61
APP ID 64
USER ID, 60
ALIAS ID 65
53 SERVER ID,
52 HREQ ID,
54 LINK ID,
55 TRANS ID,
ALIAS ID,
56 FORM ID,
FORM DATA
ALIAS ID
CERTIFICATE
"GET ID"
DOC ID 51
SERVER ID, HREQ ID,
APP ID, DOC ID, DOC
HREQ ID
APP ID
USER ID,
PRINTER ID 62
50 PAGE IDS
PAGES

FIG. 46

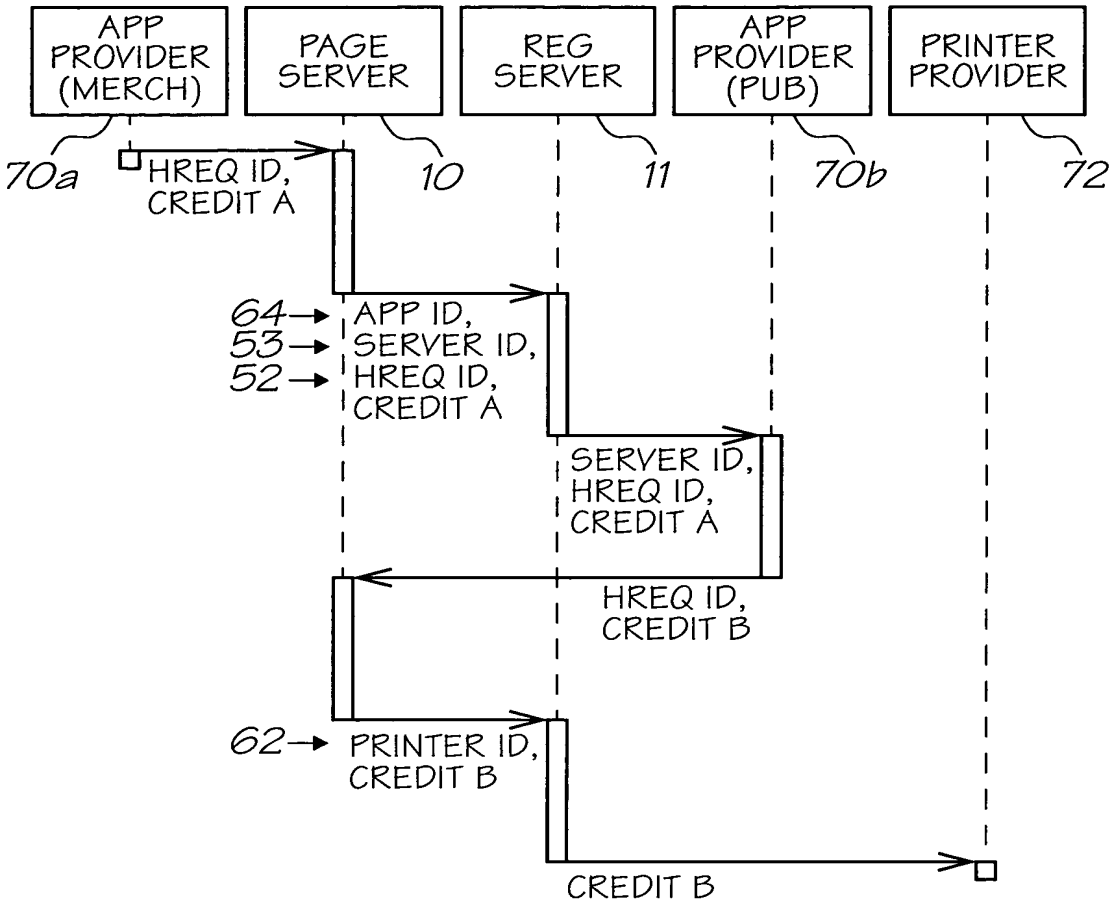


FIG. 47

09595186 - 052000

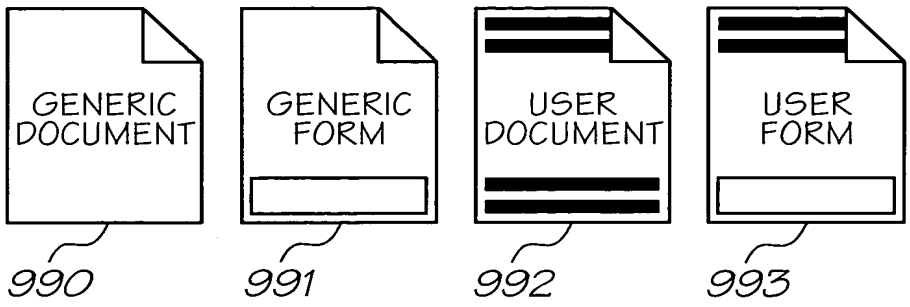


FIG. 48

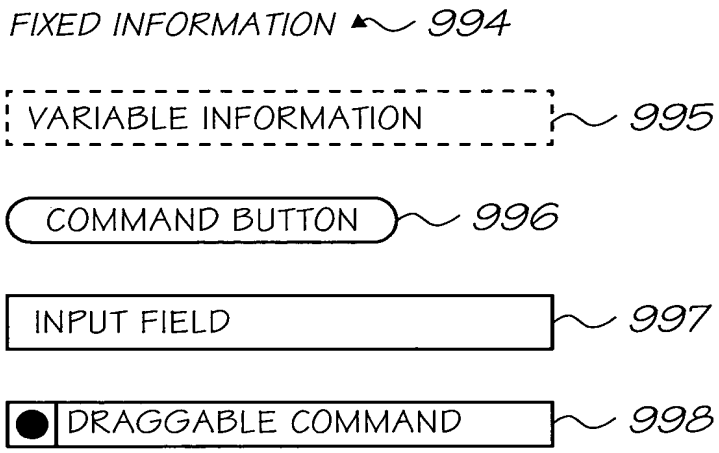


FIG. 49

09/975,486 - 09/29/2004

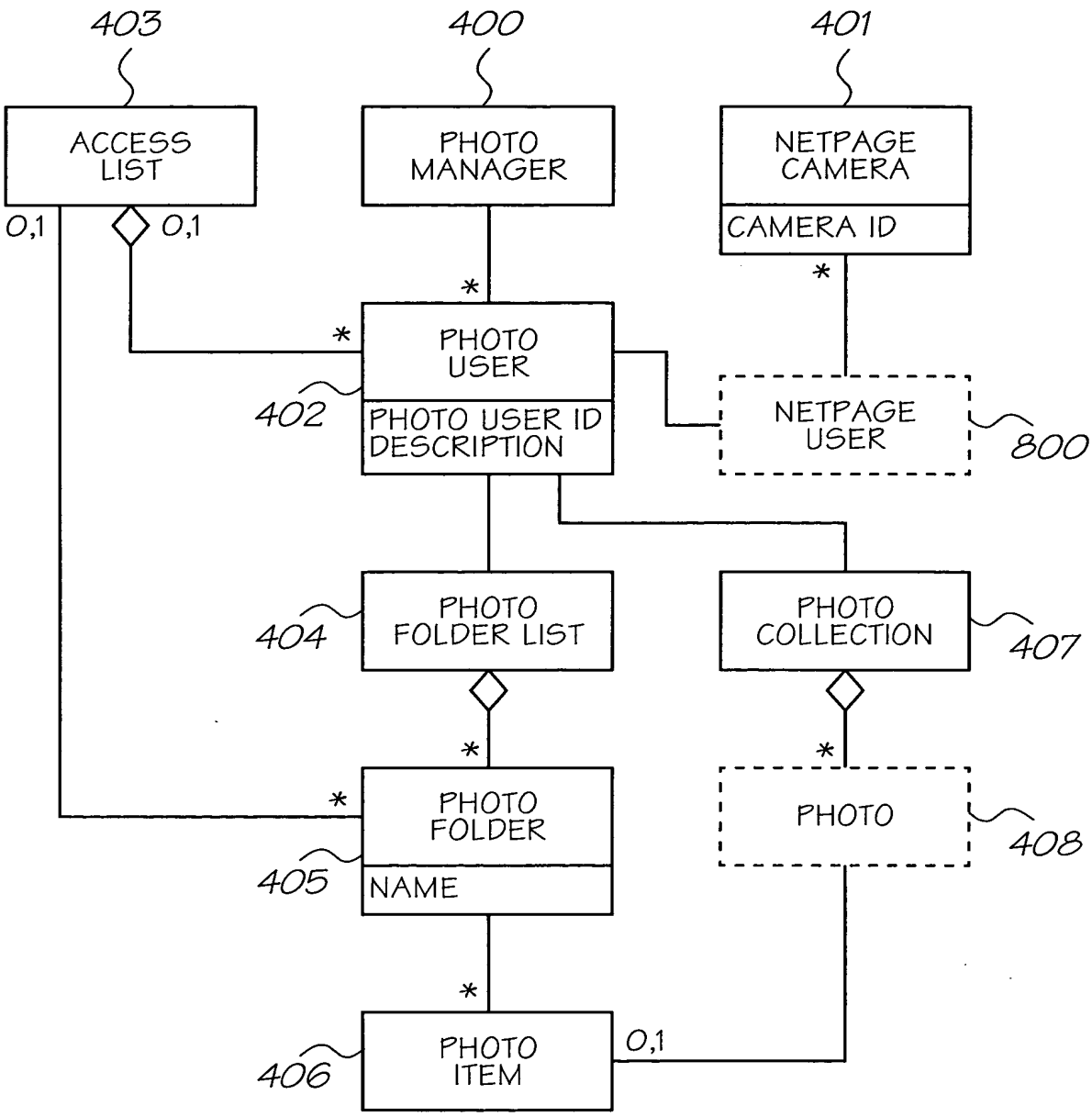

403
400
401
ACCESS LIST
PHOTO MANAGER
NETPAGE CAMERA
CAMERA ID
0,1
0,1
*
*
*
*
PHOTO USER
402
PHOTO USER ID
DESCRIPTION
NETPAGE USER
800
404
PHOTO FOLDER LIST
PHOTO COLLECTION
407
*
*
*
*
PHOTO FOLDER
405
NAME
PHOTO
408
*
406
PHOTO ITEM
0,1

FIG. 50

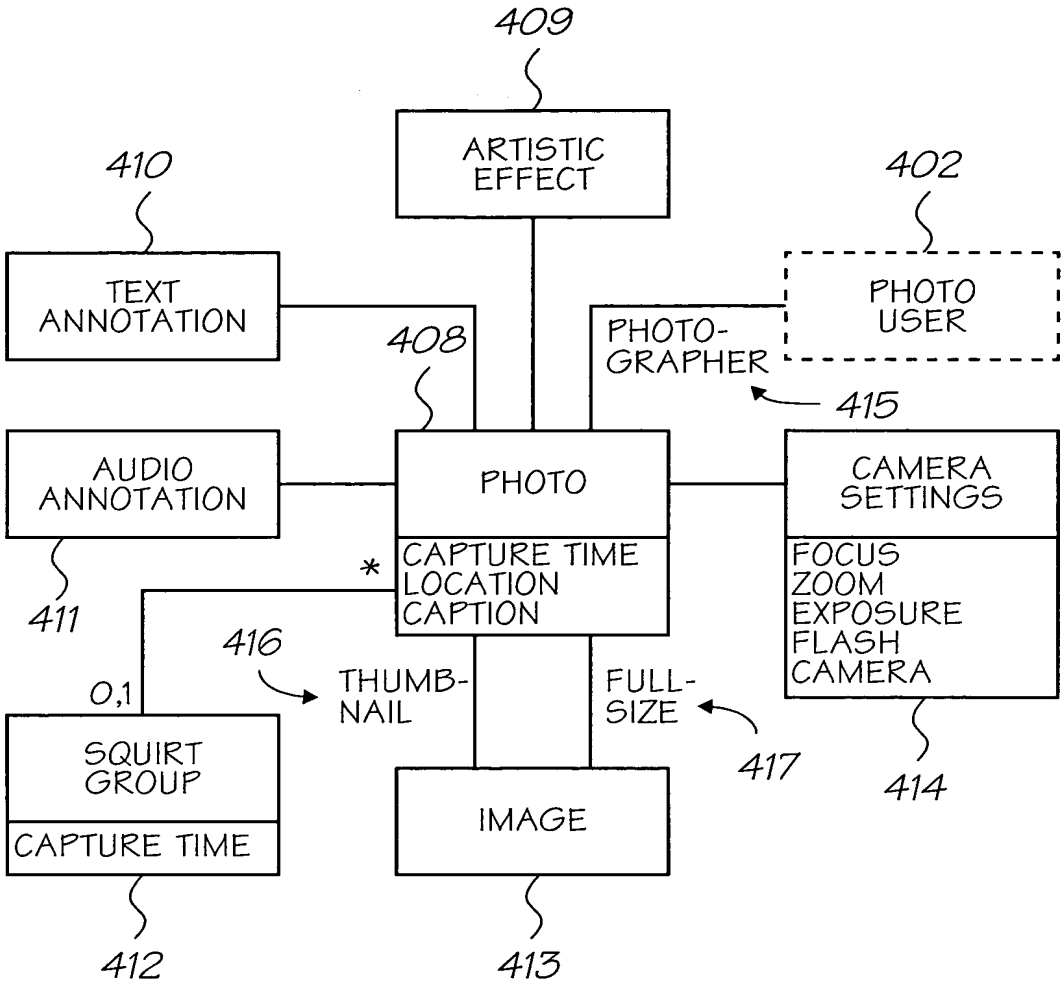

409
ARTISTIC EFFECT
410
TEXT ANNOTATION
402
PHOTO USER
408
PHOTO-GRAPHER
415
AUDIO ANNOTATION
PHOTO
CAMERA SETTINGS
CAPTURE TIME
LOCATION
CAPTION
*
FOCUS
ZOOM
EXPOSURE
FLASH
CAMERA
411
416
THUMB-NAIL
FULL-SIZE
0,1
SQUIRT GROUP
417
414
CAPTURE TIME
IMAGE
412
413

FIG. 51

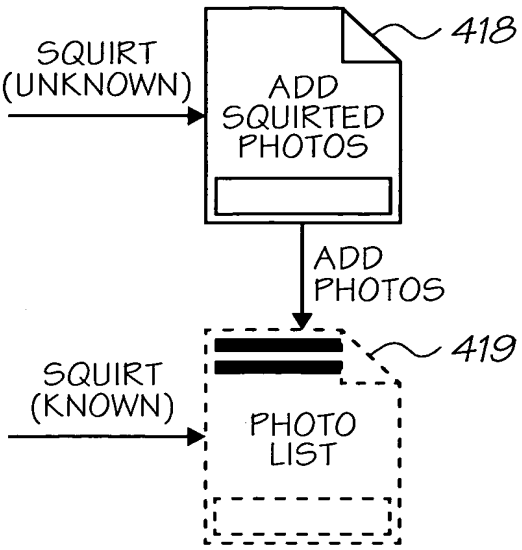


FIG. 52

09525488 - 050300

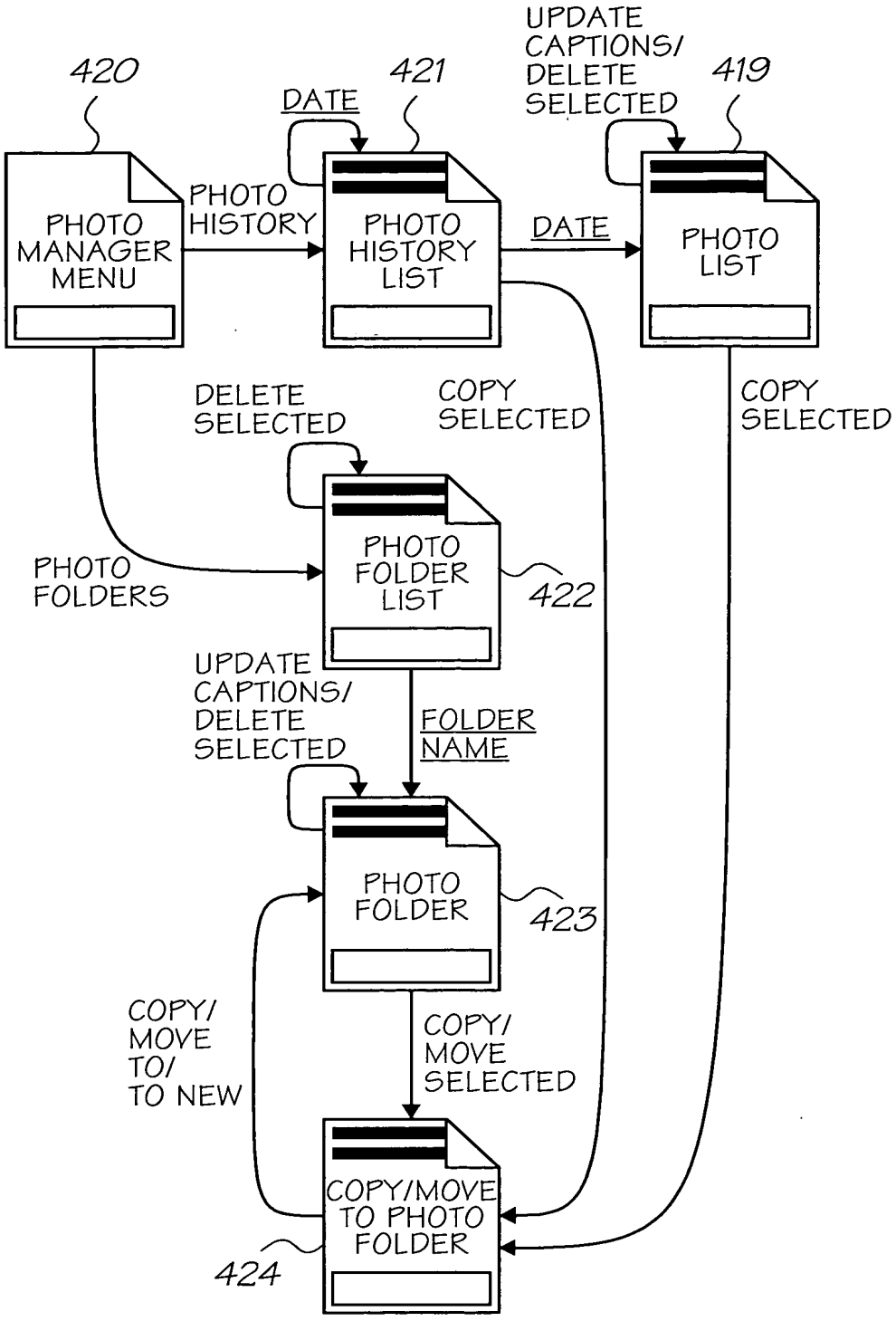

420
421
419
DATE
UPDATE CAPTIONS/ DELETE SELECTED
PHOTO MANAGER MENU
PHOTO HISTORY
PHOTO HISTORY LIST
DATE
PHOTO LIST
DELETE SELECTED
COPY SELECTED
COPY SELECTED
PHOTO FOLDERS
PHOTO FOLDER LIST
422
UPDATE CAPTIONS/ DELETE SELECTED
FOLDER NAME
PHOTO FOLDER
423
COPY/ MOVE TO/ TO NEW
COPY/ MOVE SELECTED
COPY/MOVE TO PHOTO FOLDER
424

FIG. 53

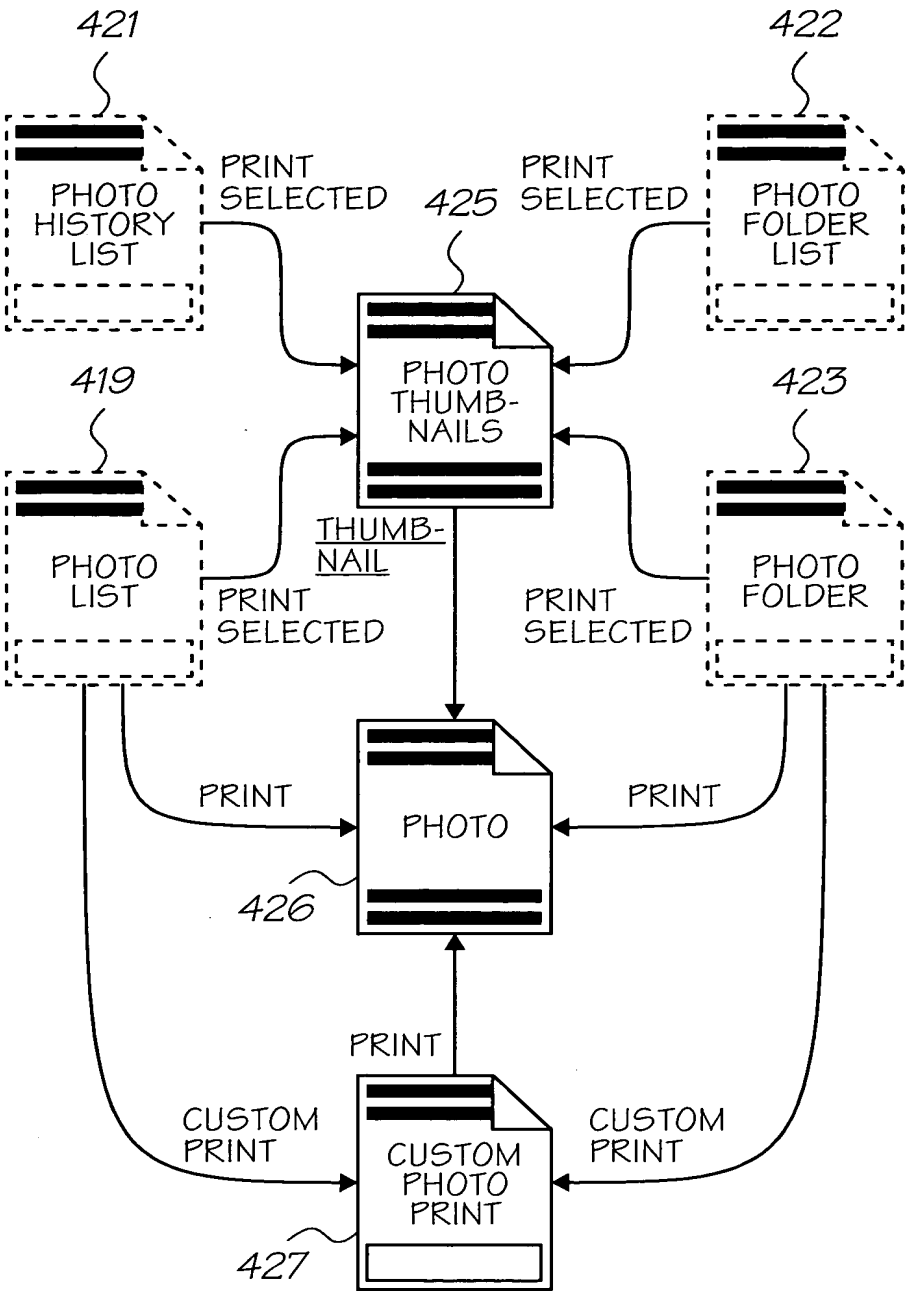

421
422
PHOTO HISTORY LIST
PRINT SELECTED
425
PRINT SELECTED
PHOTO FOLDER LIST
419
423
PHOTO THUMB-NAILS
PHOTO LIST
THUMB-NAIL
PRINT SELECTED
PRINT SELECTED
PHOTO FOLDER
PRINT
PRINT
PHOTO
426
PRINT
CUSTOM PRINT
CUSTOM PRINT
CUSTOM PHOTO PRINT
427

FIG. 54

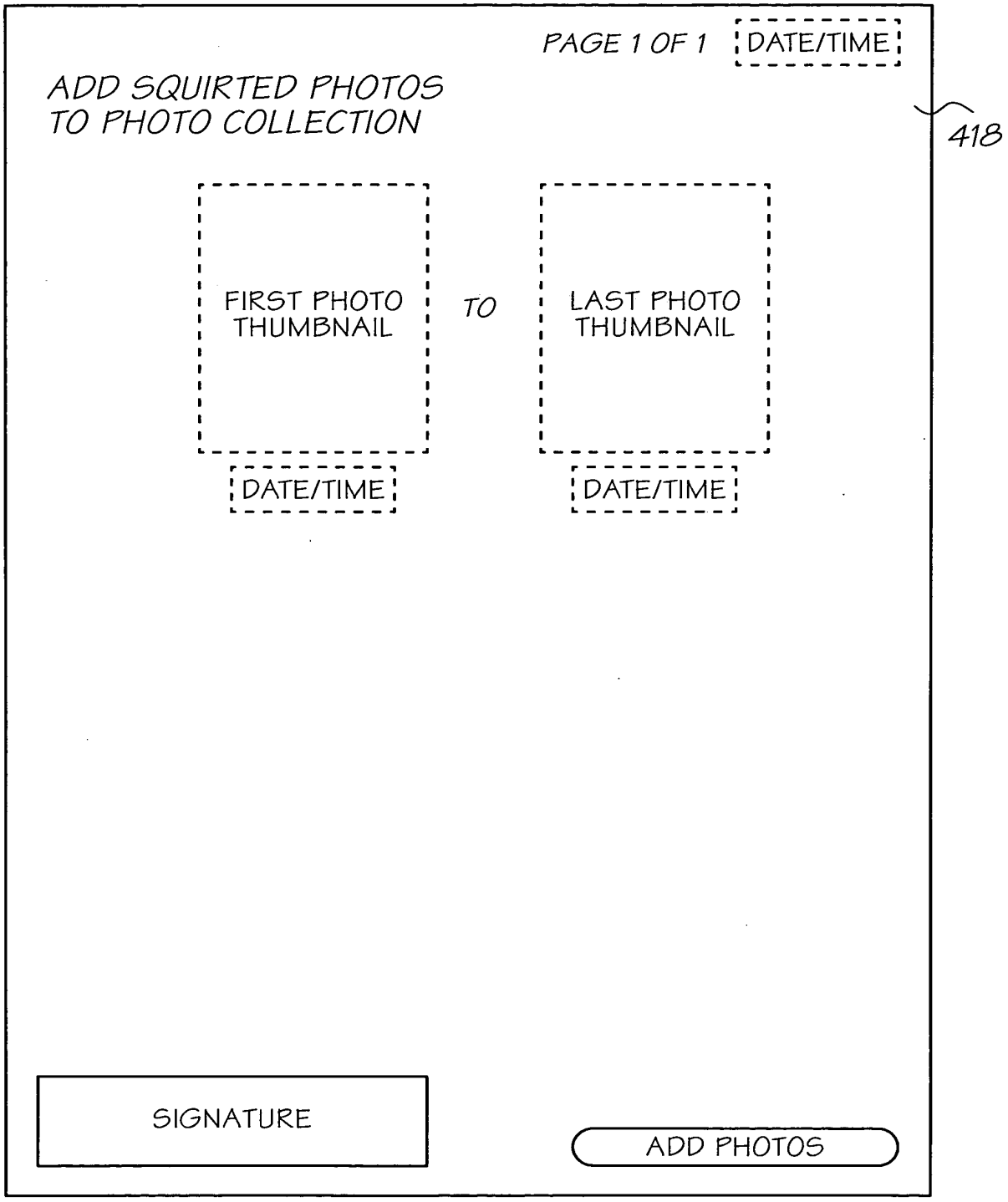


FIG. 55

0955186 : 0955186

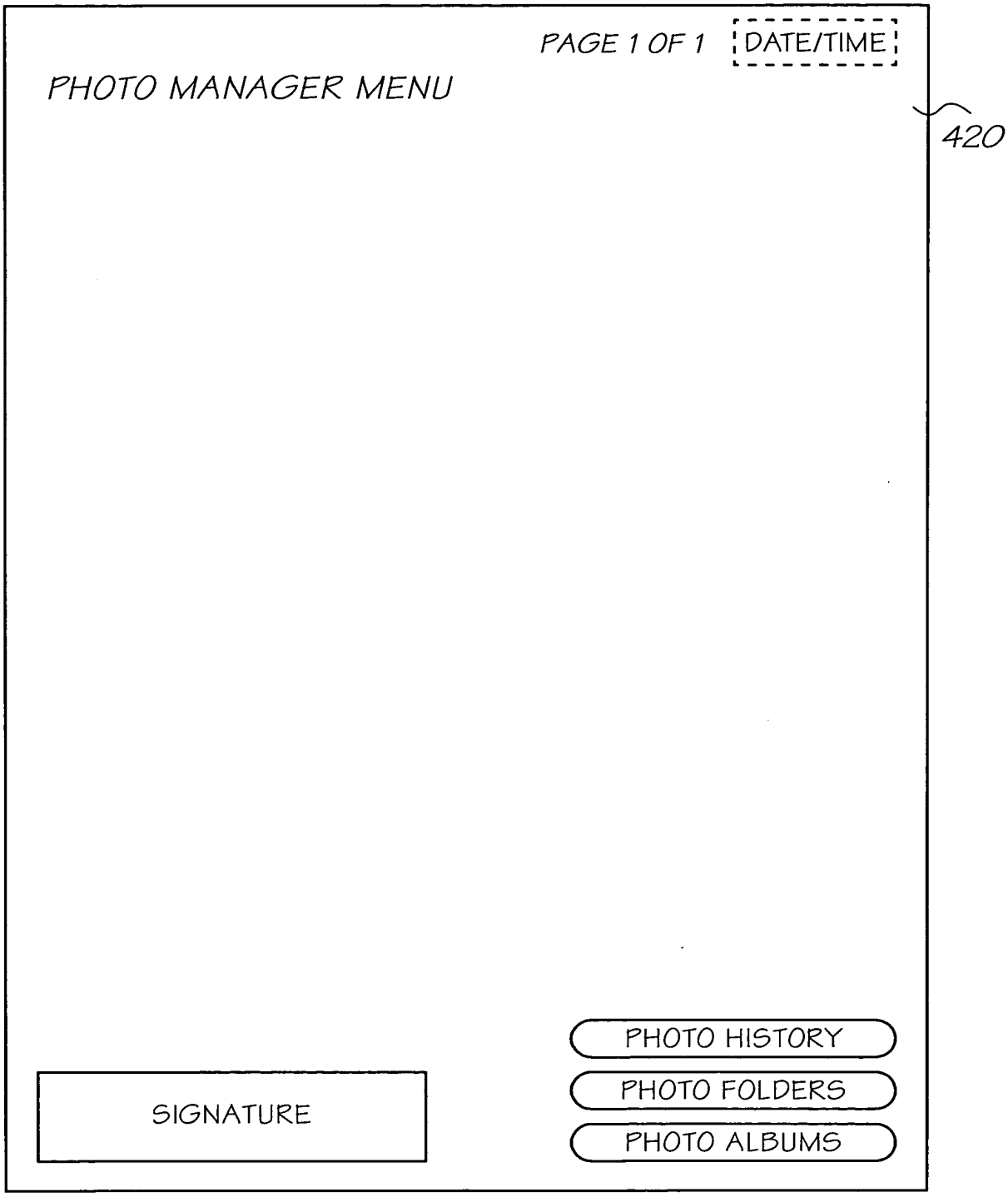


FIG. 56

0955/5389

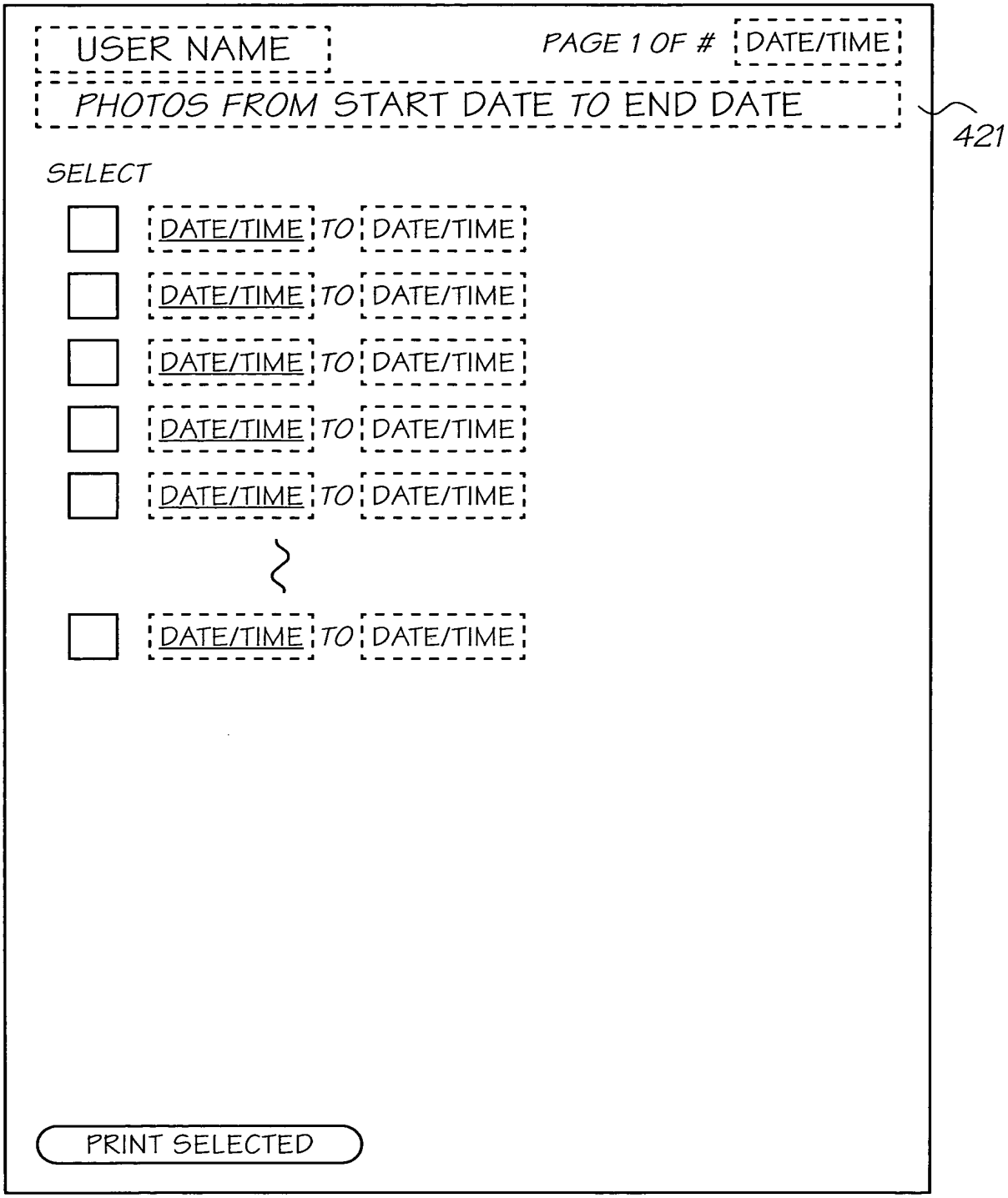

USER NAME
PAGE 1 OF #
DATE/TIME
PHOTOS FROM START DATE TO END DATE
421
SELECT
DATE/TIME TO DATE/TIME
DATE/TIME TO DATE/TIME
DATE/TIME TO DATE/TIME
DATE/TIME TO DATE/TIME
DATE/TIME TO DATE/TIME
DATE/TIME TO DATE/TIME
PRINT SELECTED

FIG. 57

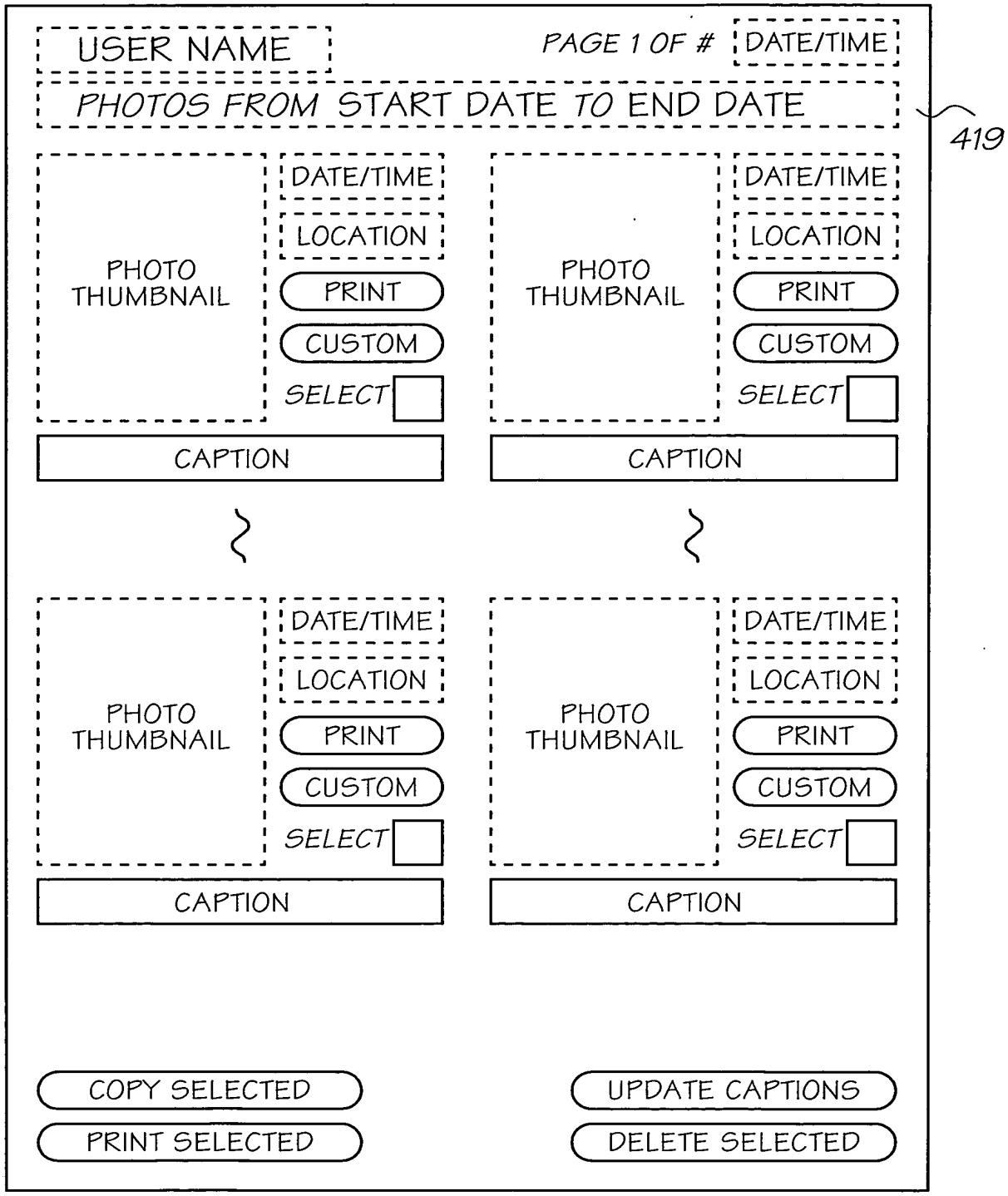

USER NAME
PAGE 1 OF #
DATE/TIME
PHOTOS FROM START DATE TO END DATE
419
PHOTO THUMBNAIL
DATE/TIME
LOCATION
PRINT
CUSTOM
SELECT
CAPTION
COPY SELECTED
PRINT SELECTED
UPDATE CAPTIONS
DELETE SELECTED

FIG. 58

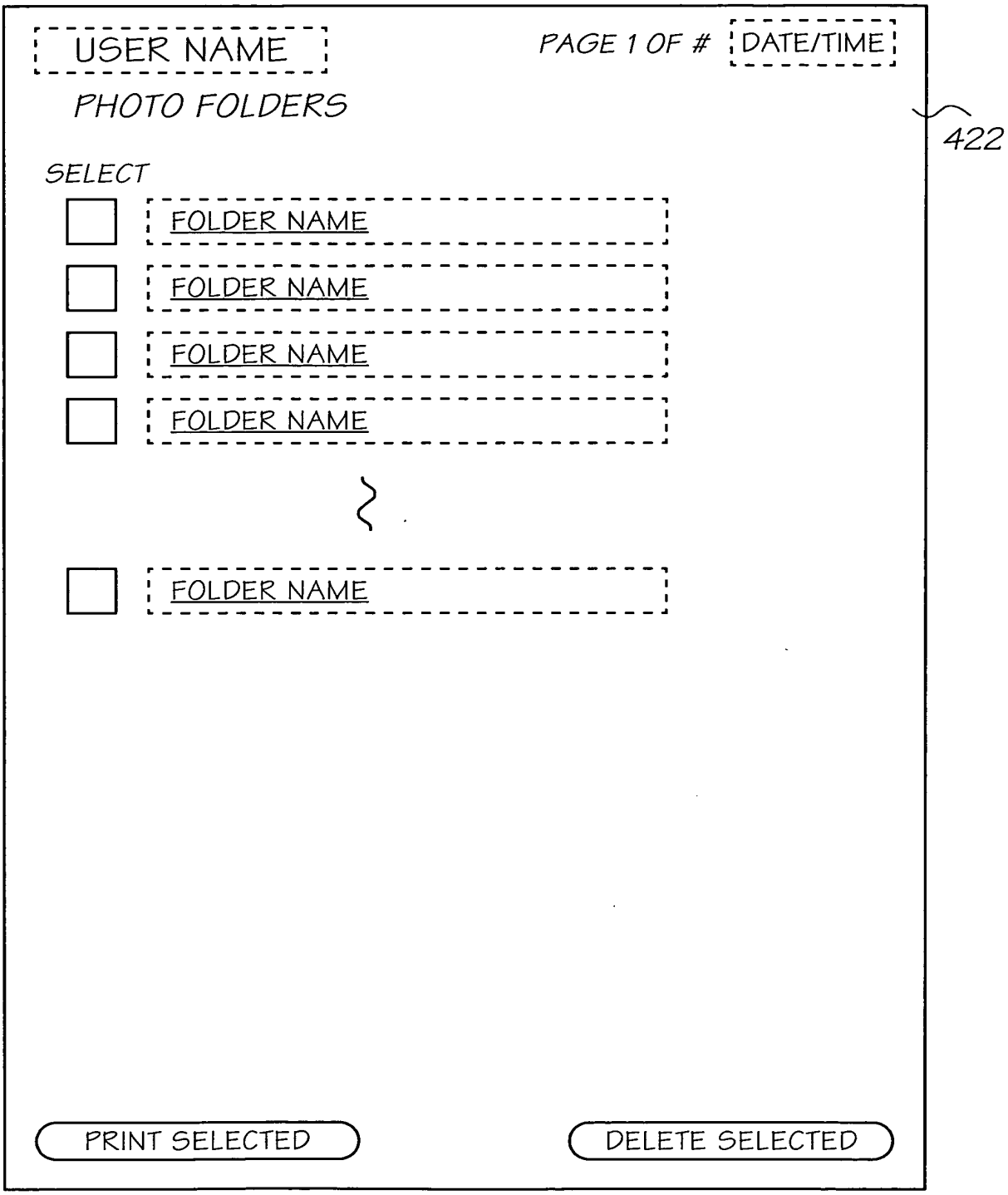


FIG. 59

09/754,938

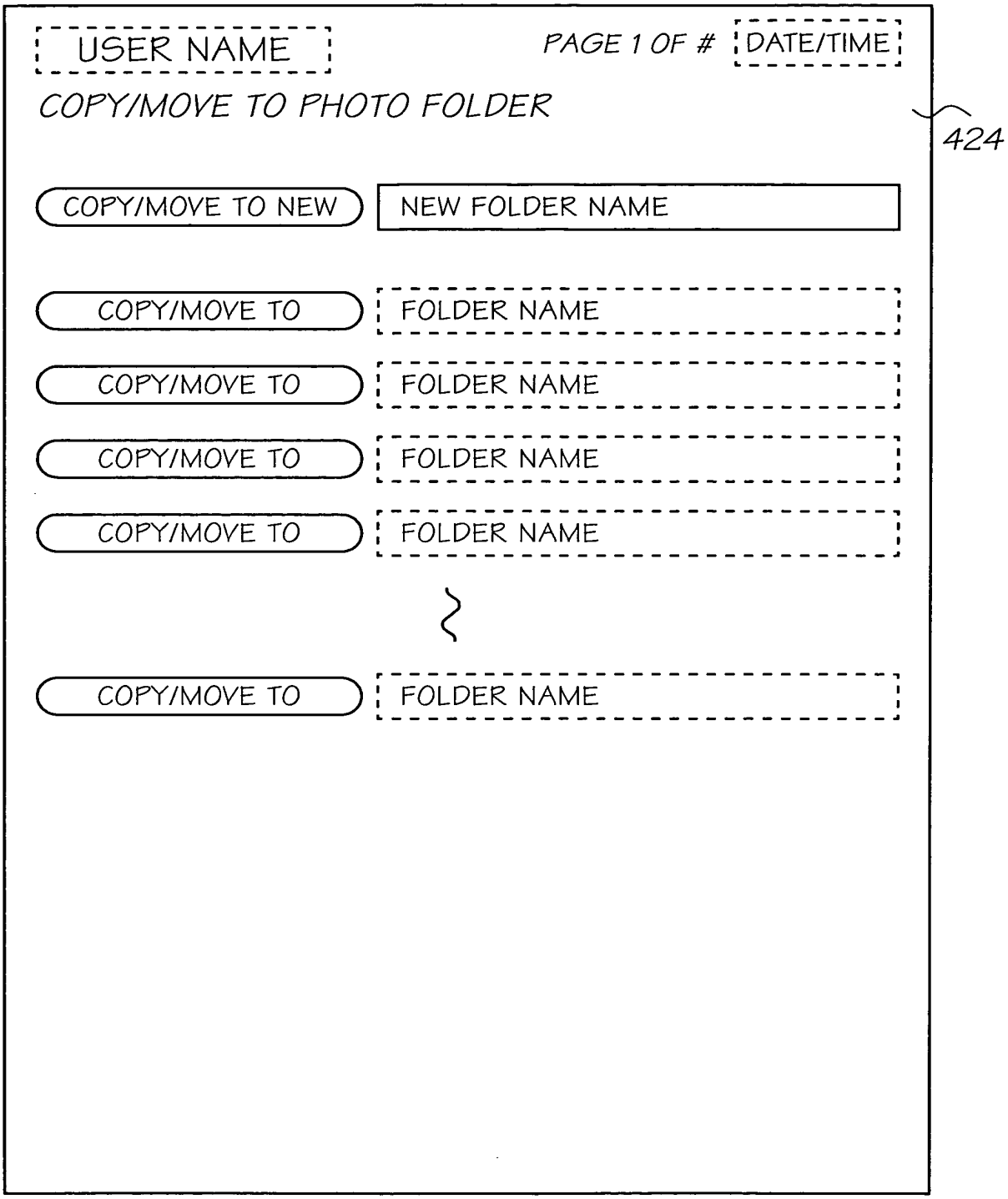


FIG. 60

0955/5686 - 0502/0800

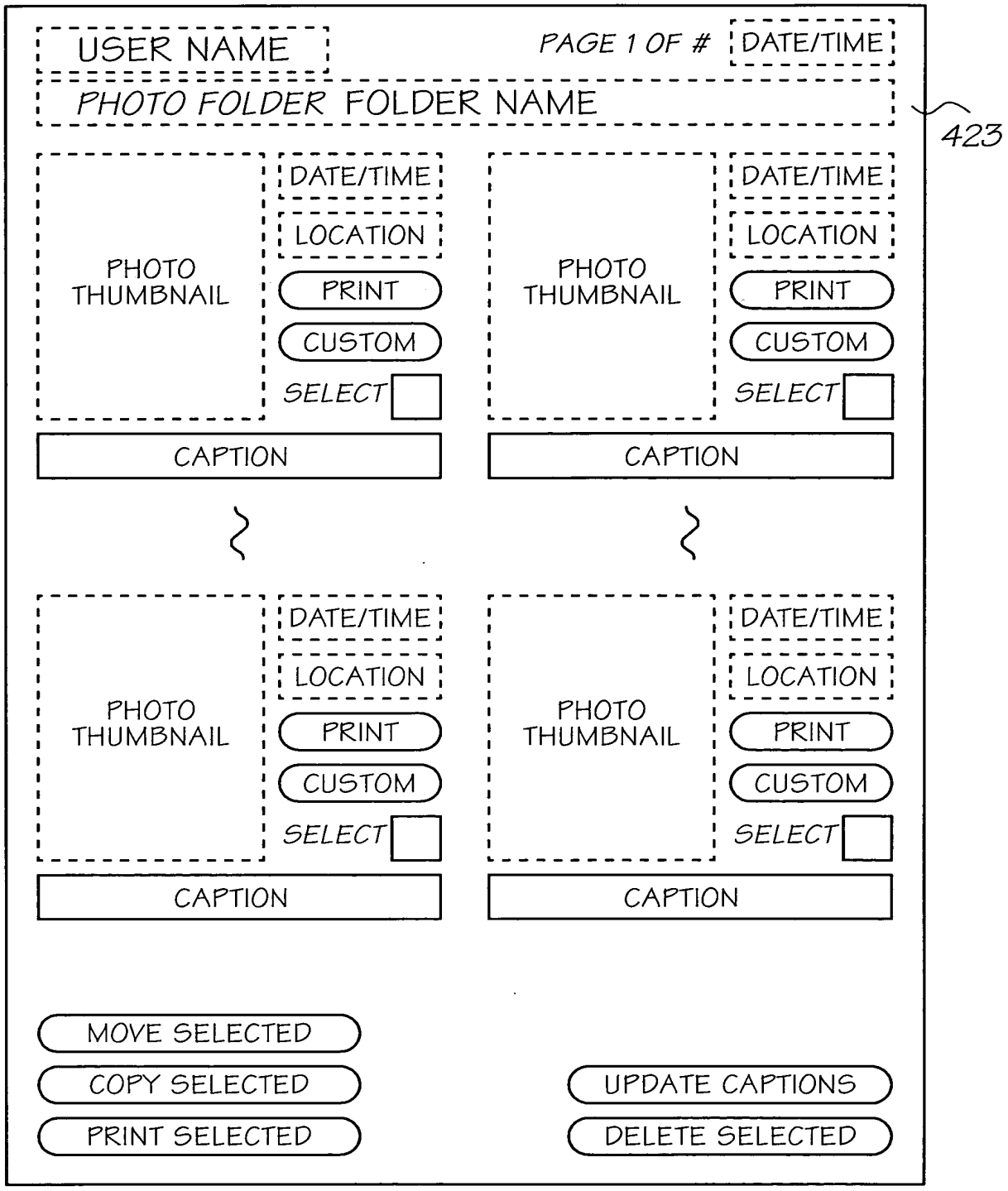


FIG. 61

09559180 - 050906

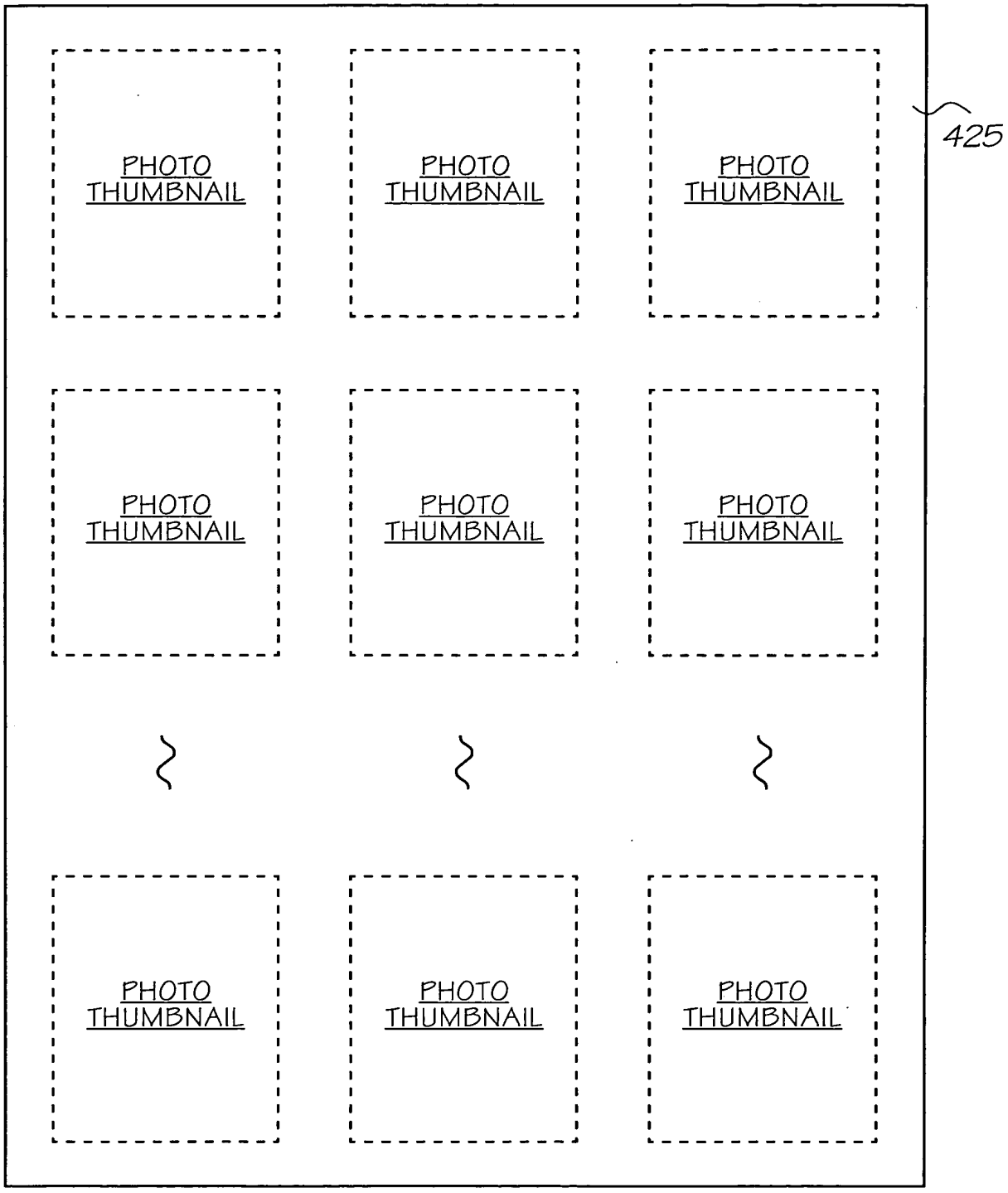


FIG. 62

09/15/2006 09:34:05 0

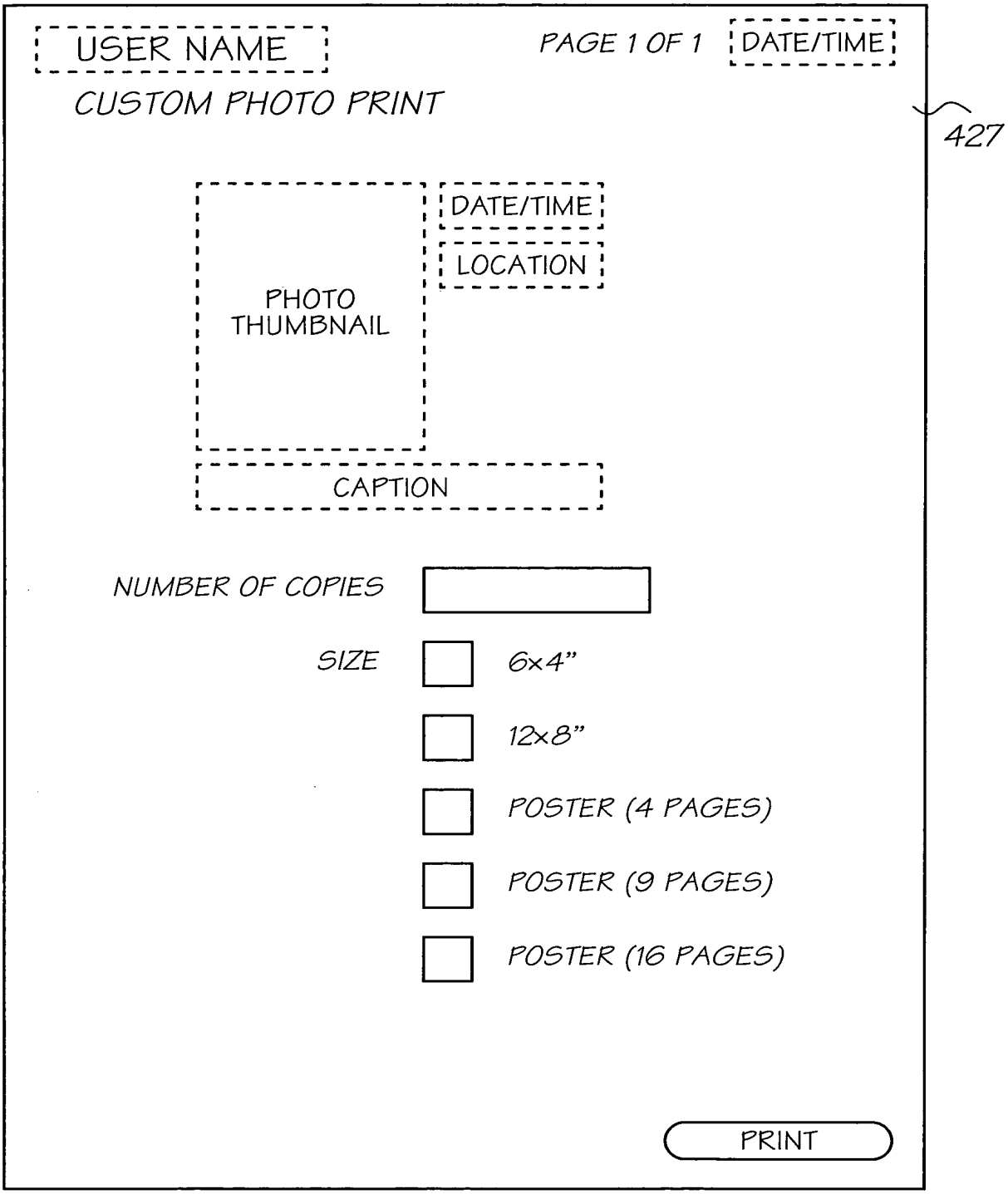


FIG. 63

0955/5486 0955/5486

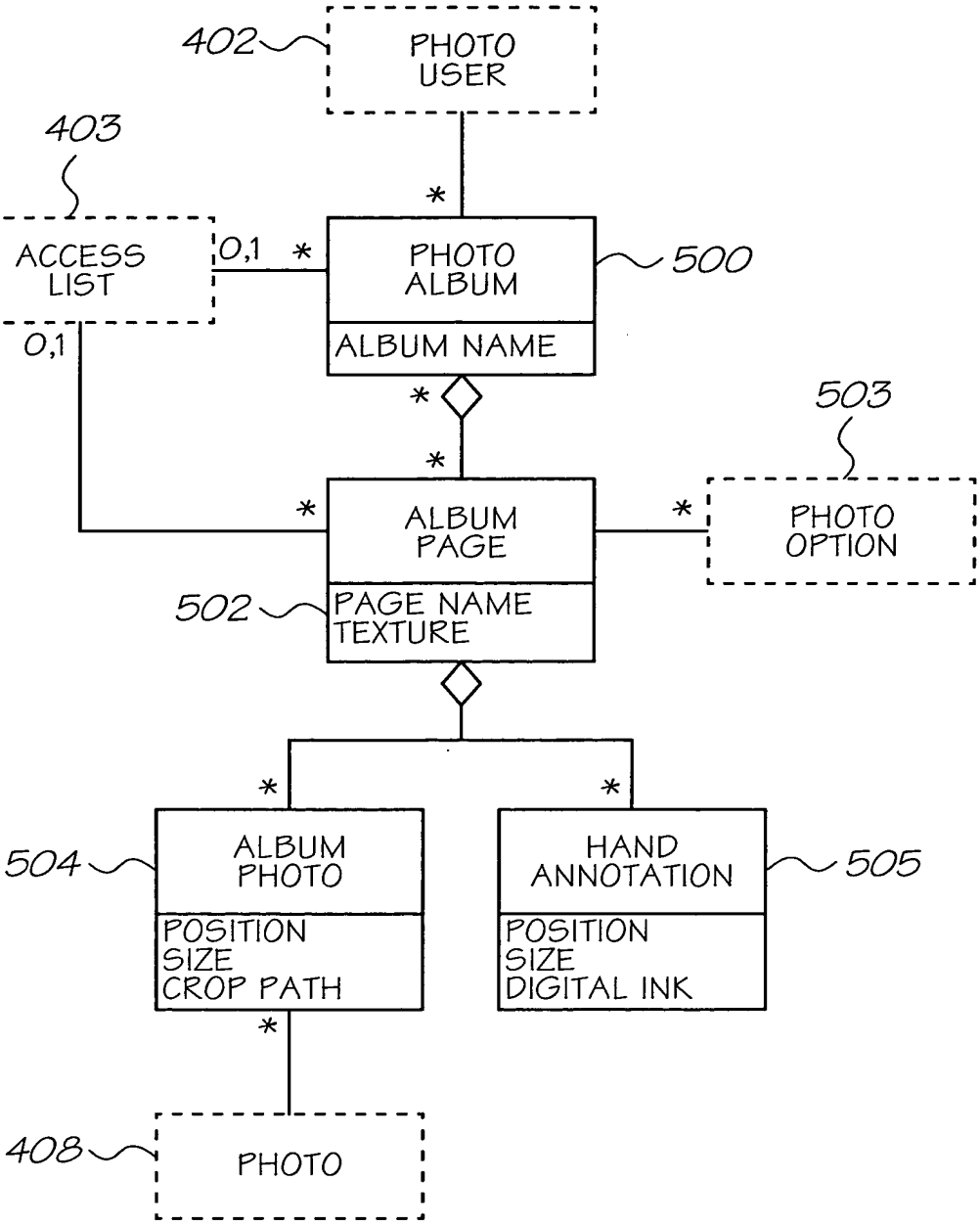

402
PHOTO USER
403
ACCESS LIST
0,1
*
PHOTO ALBUM
500
ALBUM NAME
0,1
*
*
503
*
ALBUM PAGE
*
PHOTO OPTION
502
PAGE NAME TEXTURE
*
*
504
ALBUM PHOTO
POSITION
SIZE
CROP PATH
HAND ANNOTATION
505
POSITION
SIZE
DIGITAL INK
*
408
PHOTO

FIG. 64

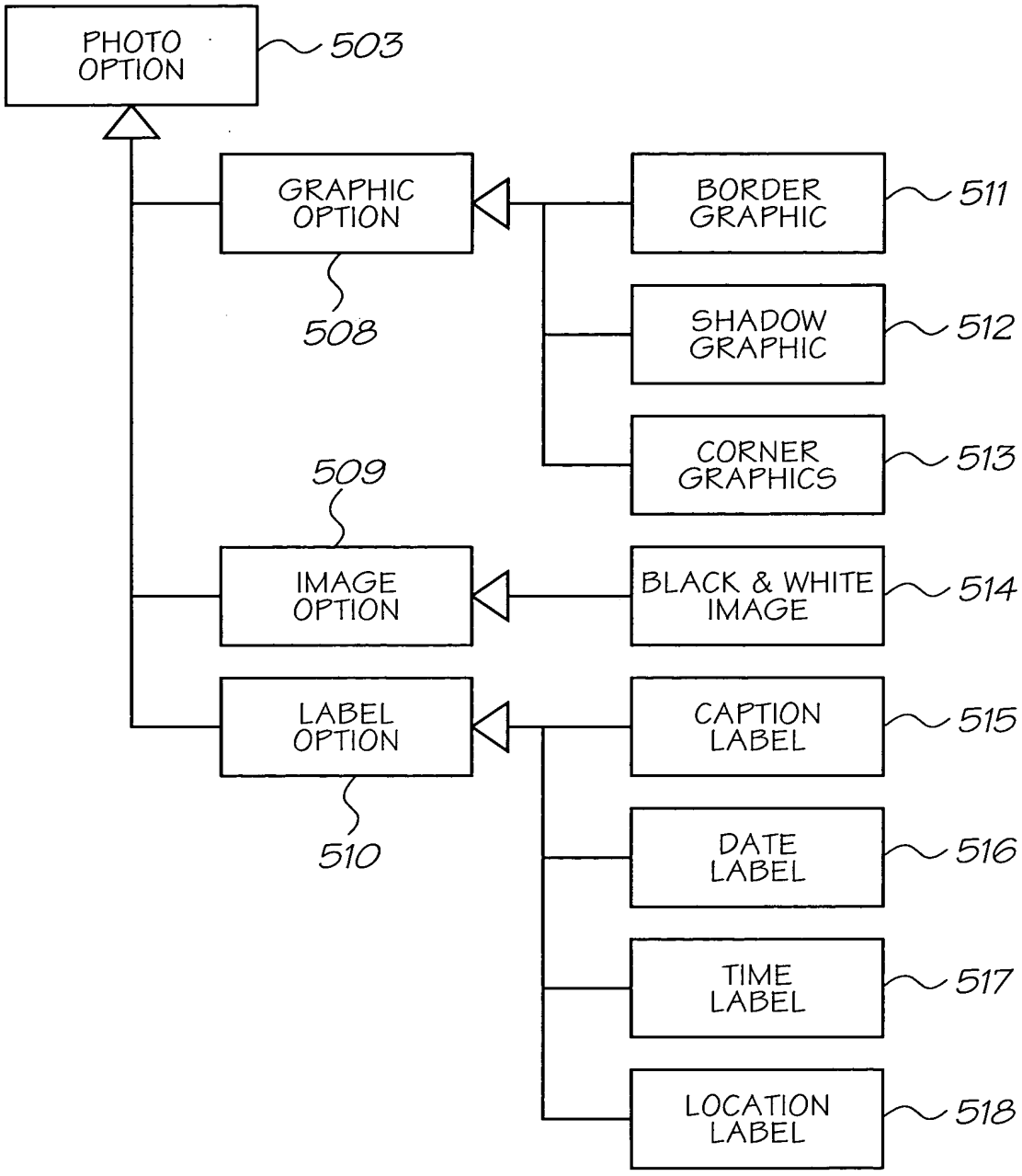


PHOTO OPTION
503
GRAPHIC OPTION
508
BORDER GRAPHIC
511
SHADOW GRAPHIC
512
CORNER GRAPHICS
513
509
IMAGE OPTION
BLACK & WHITE IMAGE
514
LABEL OPTION
510
CAPTION LABEL
515
DATE LABEL
516
TIME LABEL
517
LOCATION LABEL
518

FIG. 65

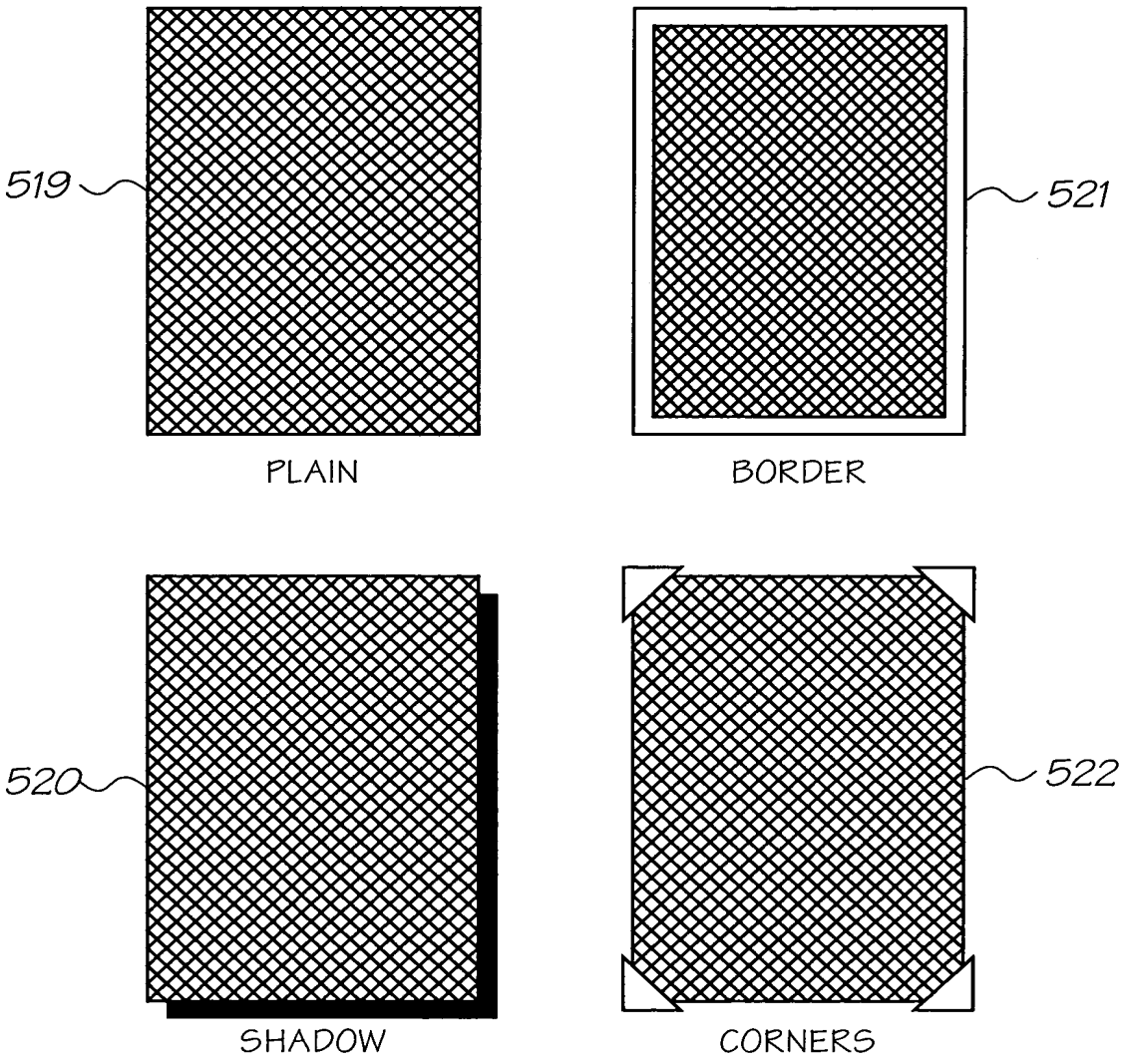


FIG. 66

09551886 050600

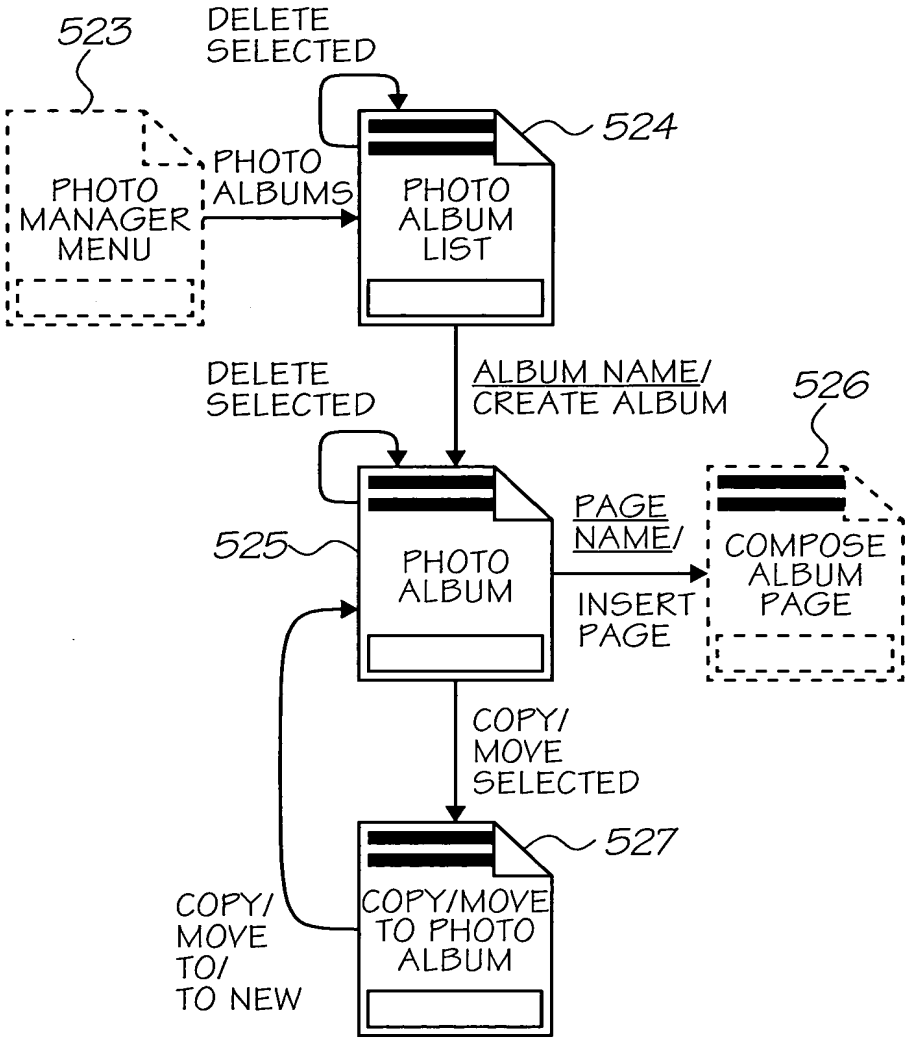

523
DELETE SELECTED
524
PHOTO MANAGER MENU
PHOTO ALBUMS
PHOTO ALBUM LIST
DELETE SELECTED
ALBUM NAME/ CREATE ALBUM
526
525
PHOTO ALBUM
PAGE NAME/
INSERT PAGE
COMPOSE ALBUM PAGE
COPY/ MOVE SELECTED
527
COPY/ MOVE TO/ TO NEW
COPY/MOVE TO PHOTO ALBUM

FIG. 67

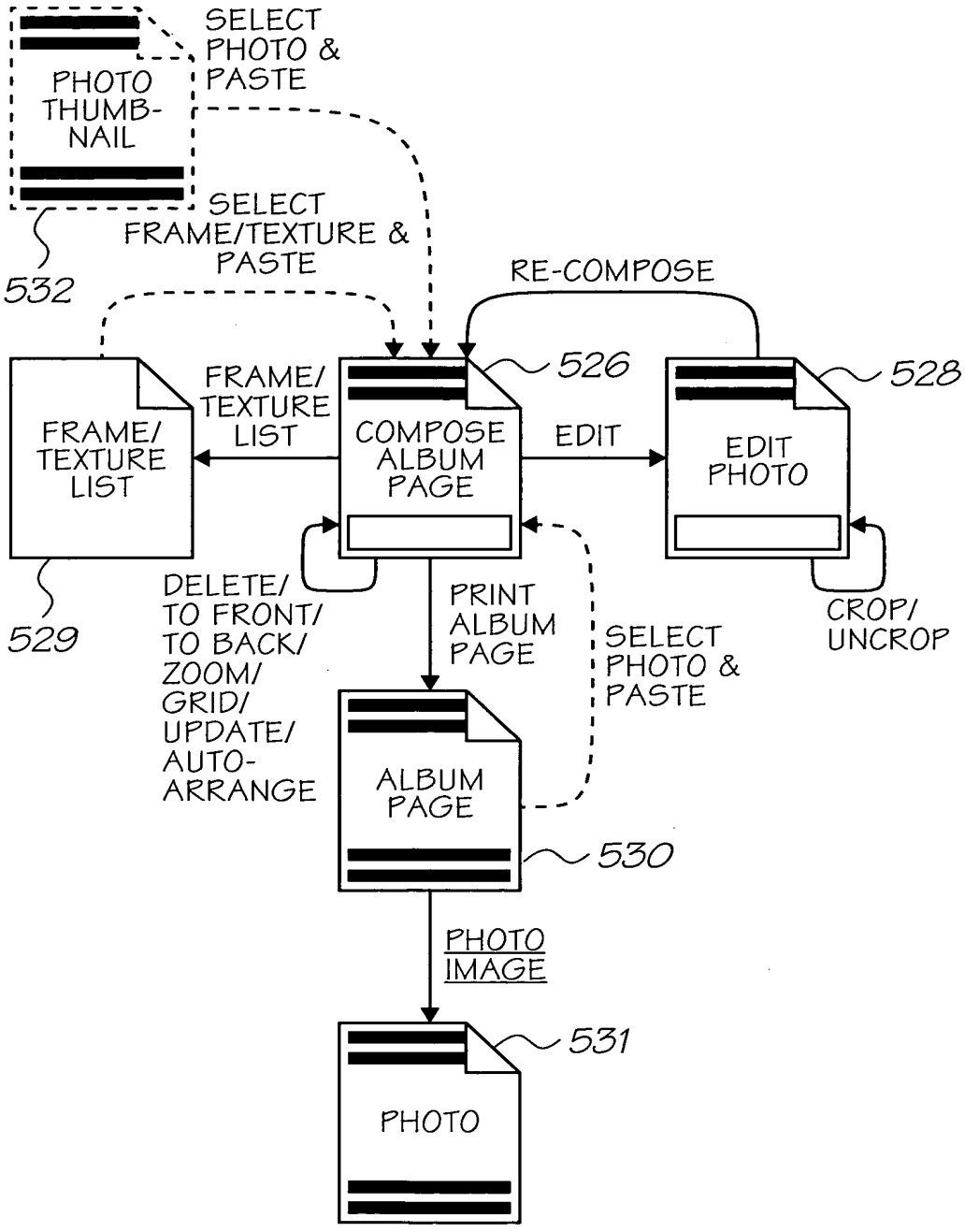


PHOTO THUMB-NAIL
SELECT PHOTO & PASTE
SELECT FRAME/TEXTURE & PASTE
532
RE-COMPOSE
FRAME/ TEXTURE LIST
529
FRAME/ TEXTURE LIST
526
COMPOSE ALBUM PAGE
EDIT
528
EDIT PHOTO
DELETE/ TO FRONT/ TO BACK/ ZOOM/ GRID/ UPDATE/ AUTO-ARRANGE
PRINT ALBUM PAGE
SELECT PHOTO & PASTE
CROP/ UNCROP
ALBUM PAGE
530
PHOTO IMAGE
531
PHOTO

FIG. 68

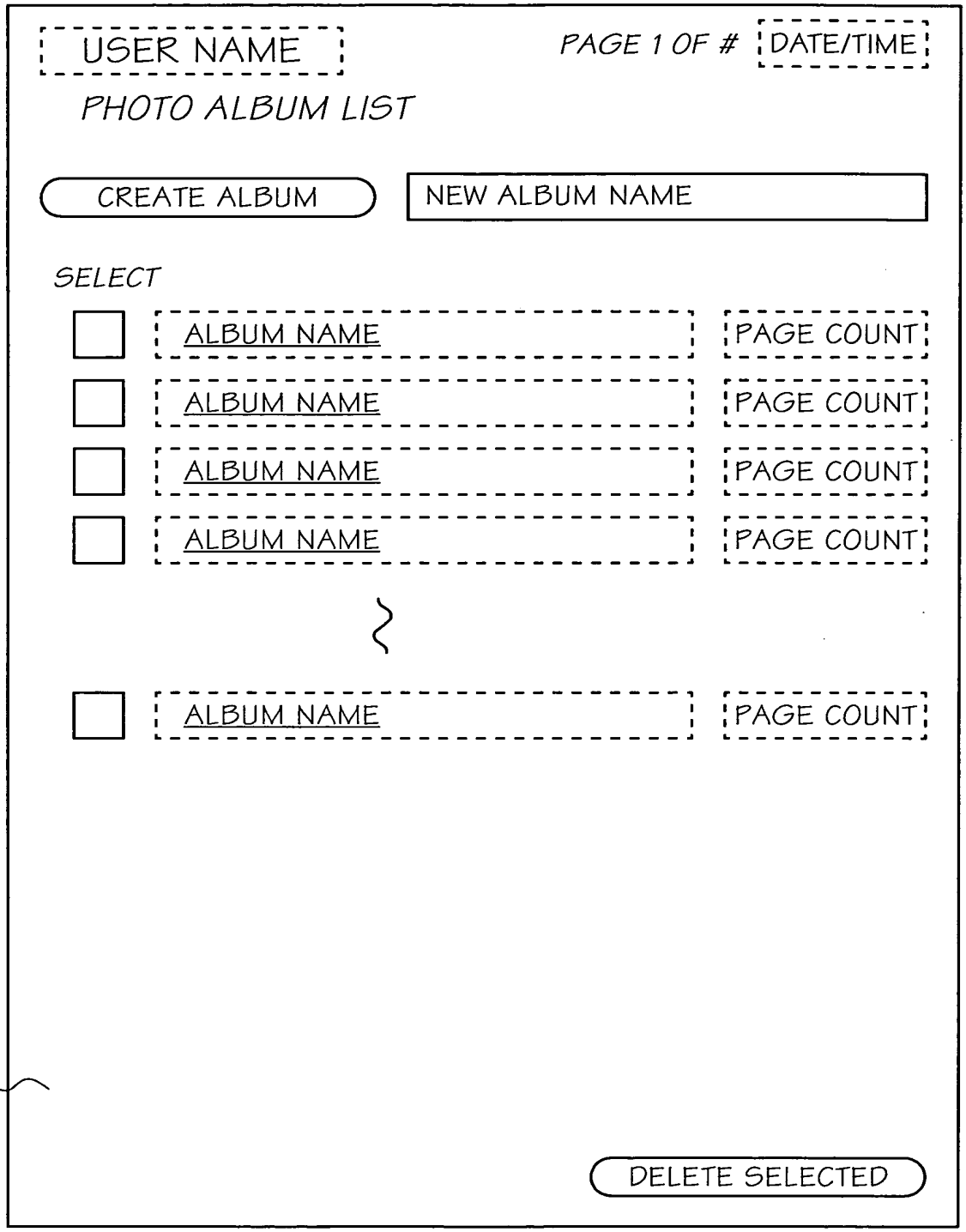

USER NAME
PAGE 1 OF #
DATE/TIME
PHOTO ALBUM LIST
CREATE ALBUM
NEW ALBUM NAME
SELECT
ALBUM NAME
PAGE COUNT
ALBUM NAME
PAGE COUNT
ALBUM NAME
PAGE COUNT
ALBUM NAME
PAGE COUNT
ALBUM NAME
PAGE COUNT
524
DELETE SELECTED

FIG. 69

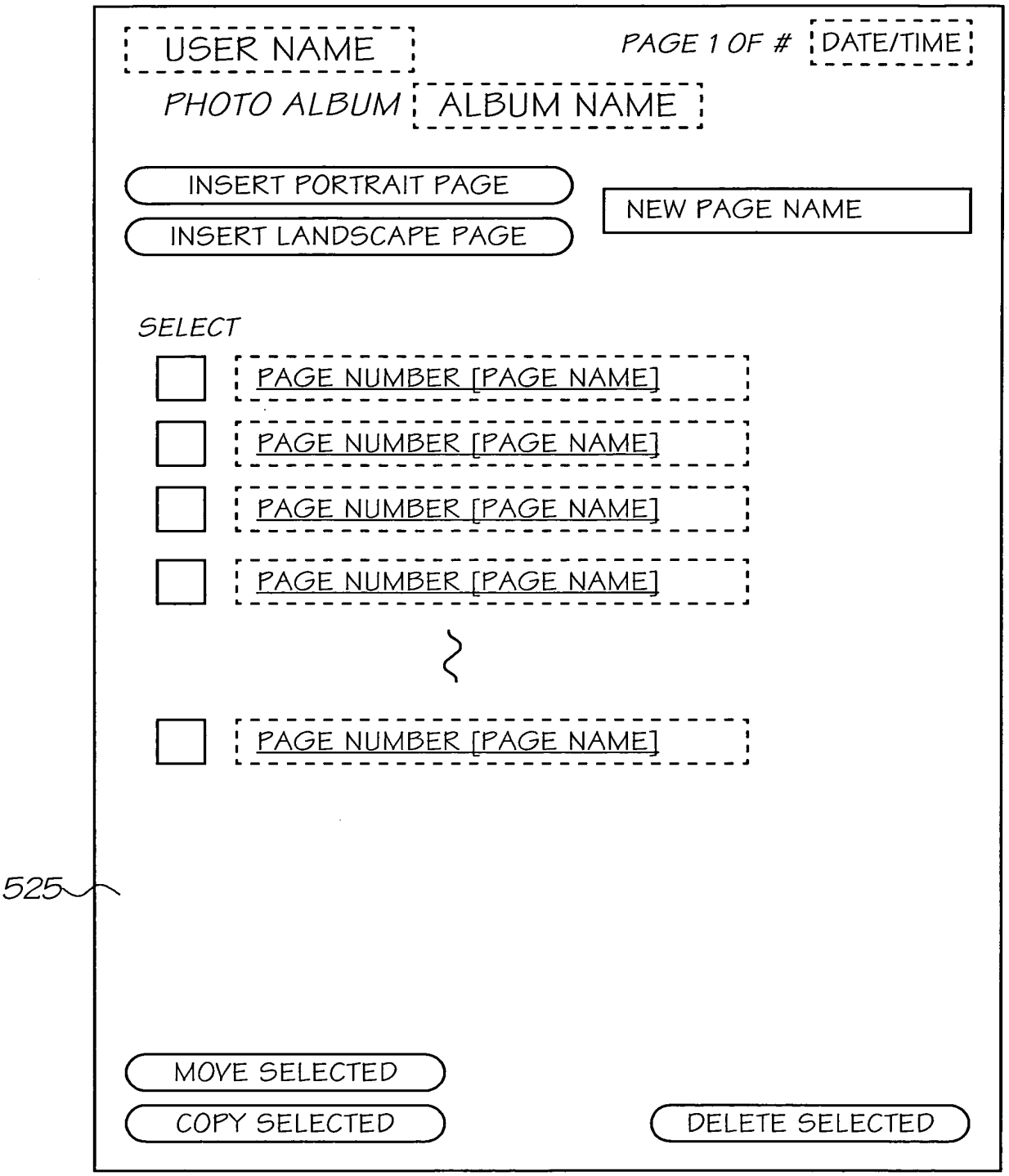

USER NAME
PAGE 1 OF #
DATE/TIME
PHOTO ALBUM
ALBUM NAME
INSERT PORTRAIT PAGE
INSERT LANDSCAPE PAGE
NEW PAGE NAME
SELECT
PAGE NUMBER [PAGE NAME]
PAGE NUMBER [PAGE NAME]
PAGE NUMBER [PAGE NAME]
PAGE NUMBER [PAGE NAME]
PAGE NUMBER [PAGE NAME]
525
MOVE SELECTED
COPY SELECTED
DELETE SELECTED

FIG. 70

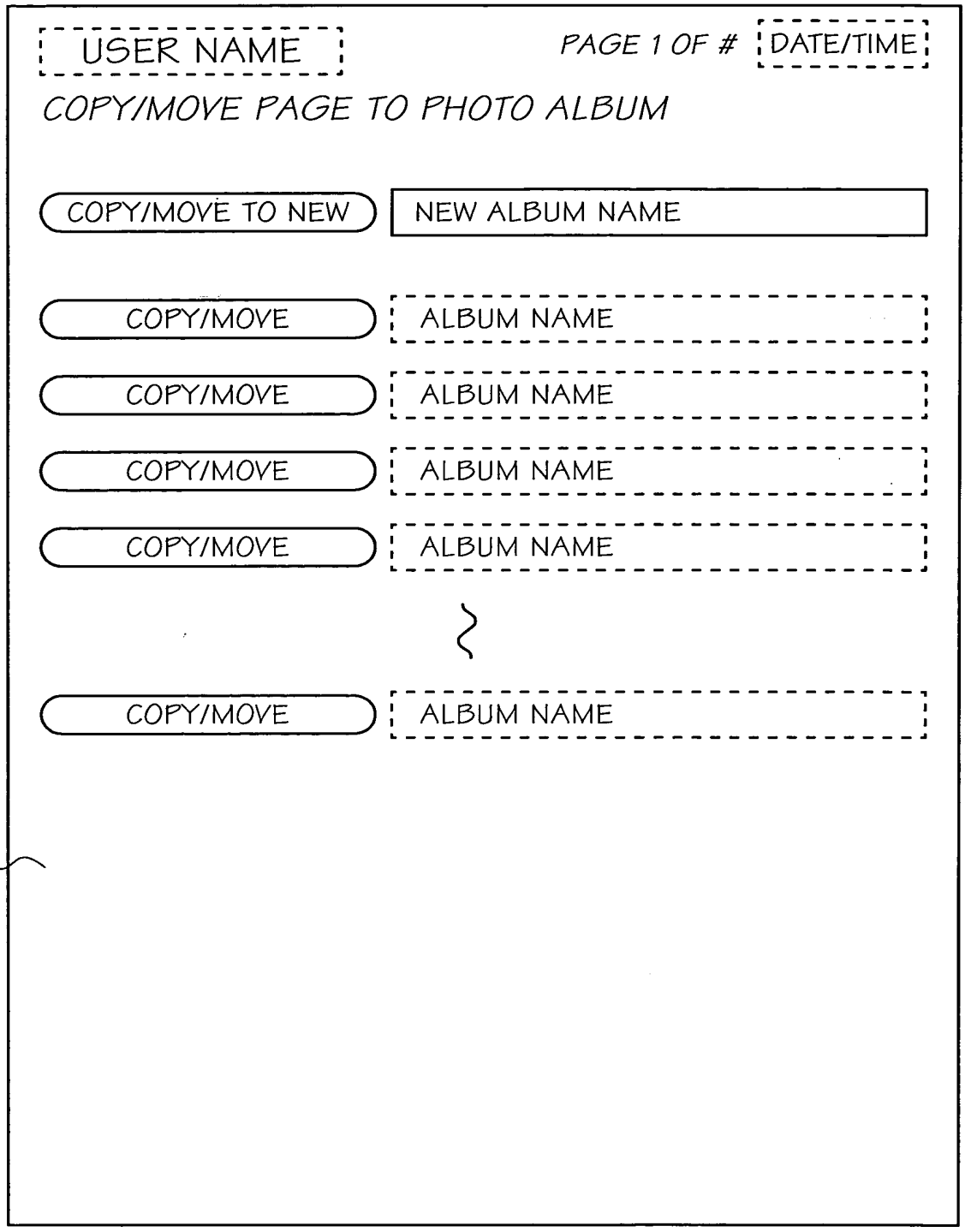

USER NAME
PAGE 1 OF #
DATE/TIME
COPY/MOVE PAGE TO PHOTO ALBUM
COPY/MOVE TO NEW
NEW ALBUM NAME
COPY/MOVE
ALBUM NAME
COPY/MOVE
ALBUM NAME
COPY/MOVE
ALBUM NAME
COPY/MOVE
ALBUM NAME
COPY/MOVE
ALBUM NAME
527

FIG. 71

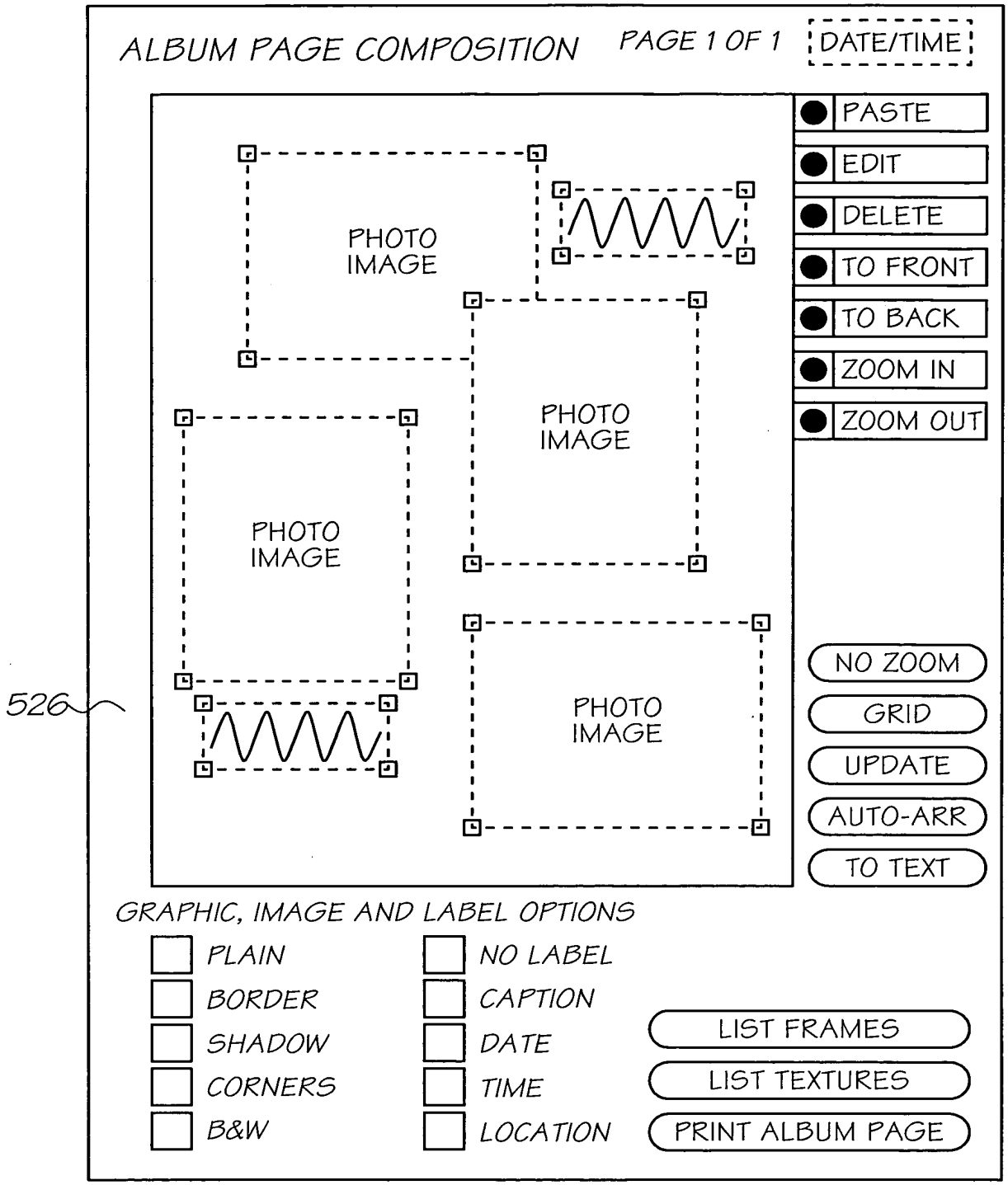

ALBUM PAGE COMPOSITION
PAGE 1 OF 1
DATE/TIME
PHOTO IMAGE
PHOTO IMAGE
PHOTO IMAGE
PHOTO IMAGE
526
PASTE
EDIT
DELETE
TO FRONT
TO BACK
ZOOM IN
ZOOM OUT
NO ZOOM
GRID
UPDATE
AUTO-ARR
TO TEXT
GRAPHIC, IMAGE AND LABEL OPTIONS
PLAIN
BORDER
SHADOW
CORNERS
B&W
NO LABEL
CAPTION
DATE
TIME
LOCATION
LIST FRAMES
LIST TEXTURES
PRINT ALBUM PAGE

FIG. 72

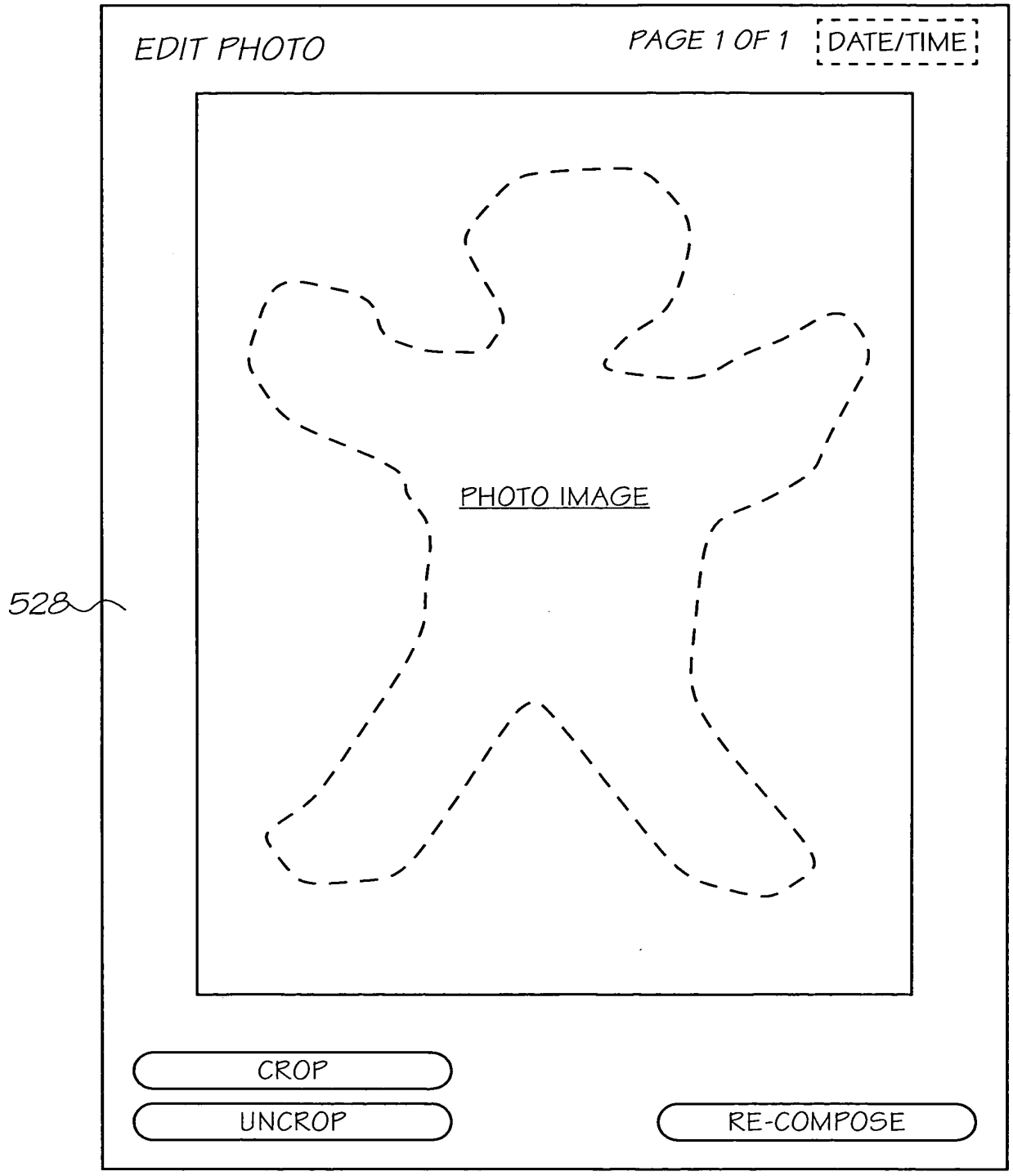

EDIT PHOTO
PAGE 1 OF 1
DATE/TIME
PHOTO IMAGE
528
CROP
UNCROP
RE-COMPOSE

FIG. 73

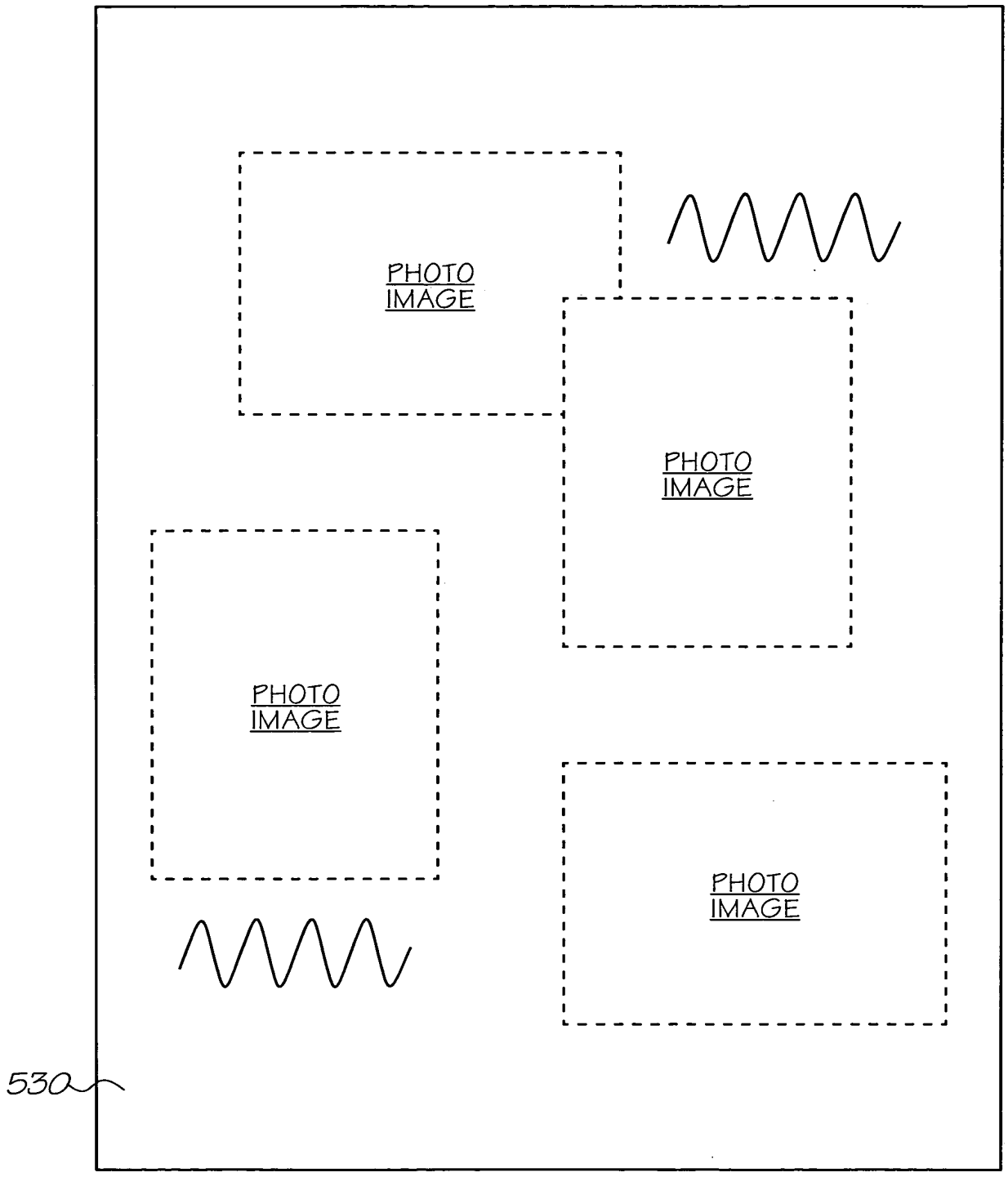


FIG. 74